An Address:

STRAY THOUGHTS ON SOME MEDICAL SUBJECTS:

Delivered before the Oxford Medical Society on Nov. 9th, 1894,

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GENTLEMEN,—At the request of the Medical Society of Oxford I am here to-night. I understood it was your wish that I should address you, and I consented, though whether you were wise in your choice I have considerable doubt. Since all scientific men believe in progress, and are ever waiting for new discoveries or fresh light to guide them on their course, it is probable that both you and I would have preferred to have something brought before us to-night which might have aided us to advance another step in our onward path. When I was a young man and offered my contributions to the medical societies I always had this object in view. Not only have my opportunities now passed away, but I have, moreover, arrived at that age when the mind itself alters and, instead of impelling us to join with those who are pressing us forward, becomes more reflective, more retrospective, and prefers to take a general survey of the prospect around. You therefore must expect from me no novelty, but be content with a few of my thoughts and reflections on some matters connected with our profession of medicine. When I look back and see the enormous strides which we have made in various subjects since my student days I would fain pause and make some observations with respect to a few steps in this great advancement. One of the most striking facts is the large number of new diseases which have been added to our nomenclature; this signifies that we now separate and differentiate many complaints which had till recently been confounded. But, putting this aside, there seems to be a general consent that the most remarkable discovery of the day, and one which may open up a new era in medicine, is the recognition of morbid germs in a considerable number of diseases. When we look at the past, and read of the plague at Athens and our own plague in London, and remark how helpless and ignorant was the profession in those days, the discovery of the germ on which those contagious diseases depends certainly stands out as one of the greatest advances in medicine ever made.

I should like for a moment to pause and ask, Why was the discovery left for the present century? I think I make the answer to the question clear by asking in return, How was it possible to recognise minute germs without the aid of some magnifying instrument? We owe it, therefore, to the invention, or, rather, the improvement, of the microscope. Some distinguished man—I think it was Huxley—has said that all advance in knowledge is made and marked by the invention of a new instrument. In medicine we have only to think of the ophthalmoscope and laryngoscope, two instruments which opened up almost unknown regions, to see how true this is. Nasmyth, the engineer, meant much the same when he maintained that the greatest progress made in his profession was the perfecting of a new tool, whether it were a boring machine for making a tunnel or a steam-hammer for welding iron. It is very evident that in all that relates to anatomy, physiology, and pathology we should have come to a standstill half a century ago but for the microscope. Knowledge would have been arrested by the limitations of our eyesight. All we now know of the tissues—the whole subject of histology, in fact—has its basis in the employment of the microscope. Our acquaintance with germs and the science of bacteriology implies the use of this instrument. Its development has opened up new worlds to us in the same way as the telescope has opened up new worlds to the astronomer when he takes a survey of the heavens. I may appear to you to be talking only in platitudes, and yet I think that when we are speaking of progress in any science, and are laying down more or less dogmatically rules to students concerning their work, we are apt to forget that while we are keeping altogether to the old lines some new mode of investigation may any day come to our aid from the outside, and introduced by those who are employed in quite a different sphere of inquiry. At any time a new instrument, invented or constructed by someone who has no knowledge or interest in medicine, may come to our assistance and start us in a new field of research. This seems to be true in all departments of knowledge, so intimately are they bound together and associated with our nature and our interests. During the time of the Queen's jubilee much was said about the wonderful advances made in the Victorian age, and amongst other events great stress was laid upon the introduction of penny postage. This was spoken of as a great legislative act, and its promoters were held up to admiration; but the public forgot the greater invention and the greater man from whom it emanated. The uniform and cheap rate of postage was a necessary outcome of the increased intercourse amongst people resulting from the invention of the steam-engine by James Watt. It was that machine which revolutionised the world, so vast were the results which followed its introduction into trades and locomotion.

I just now said that the astronomer depended on his telescope for much which he observed in the heavens, but this instrument had almost reached its limits of power; and when we consider also that the mathematical formulæ for calculations were as old as Newton there seemed no great room for advancement. Suddenly, however, light broke in from the outside by the introduction of instruments hitherto used for other purposes—the photographic camera and the spectroscope. A new impulse was at once given to the science of astronomy. The inference I draw from these examples is that we never can tell how soon an advance may be made in any department of science. We are working along old and well-worn lines, when from the outside comes a new instrument or new method of investigation which we at once use for our own department. This is not anticipated and cannot be foreseen. It seems, therefore, impossible to predicate the future in any branch of medicine. It shows how closely allied are the phenomena of nature: what is true of one section is true of another; in all of them the same laws are in operation. Even in the human body, where we are always thinking of vital and complex chemical processes, we are often struck with appearances which suggest that here also the simpler mechanical laws are in action. Look, for example, at hexagonal-celled epithelium or the bloodvessels running in a course which the simpler laws of attraction or repulsion might have devised. I once saw a workman making patterns as they do for covers of books by running together colours and oily substances, and the picture which resulted bore a very close resemblance to the villi of the chorion. We also might remember that the close packing of the organs together has much to do with their form.

As regards the great discovery of the age in medicine—viz., the existence of germs as a cause of disease—the great practical interest lies in the fact of the immunity of those persons to subsequent attacks who have already once been their prey. The same law obtains in the lower animal world, so that the injecting the blood of such immune animal into the human subject as a means of prevention or cure, or the employment of the fluid in which bacteria have been artificially grown, purports to be one of the greatest advancements in medicine of modern times. It was asserted by some prophet many years ago that in vaccination lay the future of medicine. Although one is bound to accept as a truth all the attested facts in reference to germs, yet I confess that in my opinion the extent to which some enthusiasts carry the doctrine clashes somewhat with many old-established theories. I have constantly as a teacher endeavoured to show that diseases do not fall upon us suddenly, but are of slow growth (a doctrine as old as Hippocrates), and that the more acute inflammations do not spring up in healthy persons. I have endeavoured to demonstrate the fact how the ordinary influences surrounding us, those which are insidiously tending to bring life to an end, are often the same which cut us off prematurely under the name of disease. There are a number of conditions which, when occurring in the heart, bloodvessels, bones, and joints in young people are termed effects of disease, we should call senile changes in an old person. If the effects of bad air, diet, and climate often in a very obvious way bring about morbid states, it is reasonable to suppose that the same in a minor degree are operating upon us prejudicially, although the effects are not so easily recognisable. Then, again, we had hitherto believed that temperament and the constitution of the patient had much to do with the development of disease. Of course, every one accepted the fact that in the well-known specific

diseases some poisonous seed was sown that might spring up and grow in anyone, but it was a hard doctrine to accept that in a disease like phthisis configuration, temperament, and heredity went for nothing, and all was due to a germ. It is difficult to deny the fact of infection, a very remarkable example of which is to be found in the "Life of Mrs. Besant," where she describes how her father died of rapid consumption after having wounded his hand in making a post-mortem examination upon the body of a man who had died of this disease. I confess I cannot give up the idea of predisposition, and yet do not see how to reconcile it with the accidental introduction of germs. At present one must be content to believe that the ground is prepared for the seed and that some particular soil is necessary for its development. However true this may be as regards tubercle, it is an assumption to assert that there is a necessary preparation for attacks of the ordinarily accepted specific diseases. Now as regards these there is no proof whatever of any causes predisposing to the reception of the specific germs. As regards the exanthemata, we all know that those attacked are for the most part young and healthy children. I made this statement more than twenty years ago in an address delivered before the British Medical Association, and added that it was strikingly true of typhoid fever. I had examined the bodies of a large number of persons who had died from typhoid, and the rule was that they were young and free from organic disease. I was opposed at that time for making this statement, it being then asserted, as it still is, that persons become debilitated in health and are therefore more vulnerable to the attacks of microbes. Of course it is very difficult to ascertain accurately the state of health of a patient previously to the onset of any acute disease, but we certainly do not meet with the history of any definite ailment, and on the supposition that such is necessary to antecede the reception of germs one would think that, *a fortiori*, persons with actual disease would be the most prone. Now what I stated in that address—a statement confirmed by a large subsequent experience—was that I never opened the body of anyone who had died from typhoid fever which showed the slightest particle of disease other than the recent affection which brought the patient to an end. The same was true of typhus fever with one exception, when a man who entered the hospital with disease of the heart contracted the fever while there. It was also true of the few cases of small-pox and of scarlet fever which I examined. I am not sure how true it may be of cholera, although in the few cases I examined no organic disease existed. I know we speak of famine fever and camp fever, meaning thereby relapsing fever and typhus fever, and yet in an epidemic in Russia of the relapsing type occurring a few years ago Dr. J. N. Radcliffe stated that the young were mostly attacked. So far, therefore, from persons who are diseased falling a prey to parasites, the opposite seems nearer the truth—that parasites prefer the young and healthy and avoid the old and diseased.

I might here remark that it is in these very diseases in which the presence of germs might have been expected to be present that they were not discovered. It may be remembered that Liebig was struck with the course which specific diseases took, and how it seemed to him that they resembled in chemistry the process of fermentation. He observed, for example, how the seeds of small-pox when planted in the human soil increase a millionfold and then growth ceases. He saw in this a resemblance to the production of alcohol in the fermentative process, which continues until the last particle of sugar is used up, and then ceases. In a like manner he conceived that something was used up and destroyed in the animal body, and so he coined the word "zymotic" to designate these diseases. It was adopted by the Registrar-General, and has been in use ever since. When, after many years, morbific germs were found in the form of bacteria in several diseases there seemed to be a remarkable confirmation of Liebig's views; but, unfortunately, it was these very diseases—such as small-pox, scarlet fever, and measles—that the great chemist had in his mind which failed after the most minute researches to reveal anything like microbes; and, on the other hand, those affections where they were discovered did not necessarily exhibit any of those laws which had been anticipated. The bacilli of tubercle, for example, may exist for years and produce none of the disturbing effects witnessed in the course of the exanthemata. But then we greatly lack information with respect to the natural history of bacteria, and indeed of all parasites. Do they run a course of their own and then die? I remember inquiring of the late Dr. Cobbold what was the natural age of a hydatid and of a tapeworm, and he replied that he had no information on the subject. I suppose parasites may be starved, killed by poisons introduced into the blood, or got rid of by natural processes according to the phagocytic theory; but it would be well to try to learn something of their own natural history—that is, whether they have a life of their own not immediately dependent on their surroundings. Would a tapeworm if unmolested when its host was young endure as long as the host himself, even to threescore years and ten? I apprehend some knowledge exists as to the age of parasites in the vegetable kingdom—whether their age depends entirely on that of the plant on which they grow or whether they have an independent life of their own. I suppose as regards bacteria the amount existing in the body at one time might affect the question. When the whole body is impregnated they could not exist long, seeing that not only would they use up all the material on which they feed, but they would, moreover, be killed by the poisons they themselves produce. If few and localised, new pabulum could continually be brought to them. This is true of all animal life. If we were shut up in a tightly closed room we should die from want of air and from the poison of the carbonic acid which we exhaled. I would emphasise what I said just now of parasites by repeating that in my opinion they prefer the young and healthy and avoid the old and impoverished. I think I have read in one of Herbert Spencer's works (although I am unable just now to place my finger on the passage) that he speaks of the equalising effects of epidemics on populations, for, whilst the medical man is striving to keep alive the sickly, an epidemic comes which carries off the weak, the old, and diseased. Herbert Spencer, as is well known, is generally most accurate in his facts, but in this statement I believe him to be in error.

As regards the parasitic theory of cancer I should like to say a word, since I have heard men of great eminence declare their conviction that microbes would speedily be discovered in this disease. There have been a good many workers in this field of research, but at present a wide difference of opinion exists as to the nature of certain bodies which the microscope reveals. My own opportunities have passed for studying the question, but as others have ventured to express their opinion on theoretic grounds, going so far as to insist on the necessary existence of germs, I may also perhaps be allowed to say a word in the contrary sense for similar reasons. Of course, I cannot shut my eyes to facts, but at the present time my opinion is opposed to the probability of the parasitic doctrine being true. I reason in this way: the arguments in favour of specific germs in cancer do not stand on the same ground as in those diseases where such germs undoubtedly exist. In the latter the diseases are pure and simple. Individual examples may vary in intensity, but not in kind; they closely resemble one another, and each disease propagates its like; but this is not true of cancer. This disease includes a variety of growths which differ in form, character, and qualities as well as in the fact of being histologically unlike. They have only this in common—that they are destructive to their surroundings and propagate through the system. It would therefore necessitate the existence of one kind of germ in an encephaloma, that of another in an epithelioma, and a third in a sarcoma. When we regard them more closely we observe that much of their character is derived from the locality whence they spring; for instance, I have seen two or three cases of bony tumours in the lung and abdomen, but these were secondary to a similar growth on the femur. I have seen well-marked myeloid tumours in the lungs, and these were secondary to similar growths in the head of the tibia and fibula. In the same way diffused melanotic tumours are generally seen to have had their origin in a mole on the skin or in the choroid of the eye. Epitheliomas may be found in the kidneys, liver, and supra-renal capsules adjacent to a similar growth in the œsophagus; or an adenoid tumour may be found in the liver, secondary to a like growth in the rectum. It is very obvious that in these and similar instances the locality in which these tumours spring up has much to do in determining their nature. Now, on the hypothesis of the existence of cancer germs, it must, I apprehend, be supposed that each of these growths has its own special germ, with this peculiarity, that, unlike other germs which always produce their like in whatever manner they are introduced into the system, these cancer germs have special characters according to the locality whence they spring. This is giving them very new and remarkable powers, and is

opening up an entirely new field of inquiry. Then, again, it might be said that there is one germ—only one similar malignant basis—for all, and this has added to it some other material derived from the place where it grows—that is, an osteoid cancer has a specific cancer element to which bone is added; a myeloid has the same cancer element with the addition of giant myeloid cells, and so on. It is clear, however, that osseous matter, myeloid, and epithelium may be propagated through the body. If this be so, where, then, is the hypothetical necessity of introducing a special cell endowed with peculiar qualities to account for the phenomena? If they have not this innate power, but require some new force to aid them in their growth and propagation, and if this be due to a special cell, each form of growth must have its own cancer cell, or, if there be but one cell, it must undergo variations according to circumstances. Each proposition is surrounded with difficulties. What we really observe is this: particular parts of the body composed of the simpler tissues begin to grow and sprout, and we ask, what is the nature of this fresh power with which they have become endowed? For the reasons already given I do not see how the existence of a cancer cell can explain the various forms of malignant tumours, or, indeed, cover the whole ground which the subject requires.

In spite of the discovery of microbes, showing how many of our diseases are due to the accidental introduction of some poisonous germ, I still think the great work of the practitioner, as well as that of the pathologist, is to endeavour to trace out the various deleterious conditions surrounding us which tend to our impoverishment and degeneration. When we see comparatively young persons break down in health and become a prey to a fatal affection like Bright's disease we naturally ask, What were the special conditions under which he was living which induced the complaint? We have daily evidence that a combination of deleterious influences are at work to produce disease, not only in the slow degeneration of our patients, but in their remarkable restoration to health when these are removed. For example, a man of middle age becomes pale, fat, flabby, and breathless, with perhaps some œdema of the feet; he goes to a German watering-place, is strictly dieted, takes saline aperients, walks out in the salubrious air, and returns home a comparatively vigorous man. There are no more important considerations than these, the discovery of good influences which affect the growing youth, and of bad ones, which hasten decay in the old. Everything on our globe shows growth and decay; but why these should vary so much as regards rapidity of action in the lower animals, and even in man, is difficult to say. It is one of the most puzzling problems in physiology, and yet its solution is an undoubtedly very important one. In the vegetable world the seed springs forth as the sun pours down its rays upon it; it develops into a plant as the earth pursues its course, and in winter it dies, having enjoyed one year of life. In the lower animal world we observe similar phenomena, until we reach a higher grade, where a longer period of existence obtains. The dog revolves ten or twelve times around the sun, and his body is worn out. A horse makes twenty or thirty revolutions before the same effect is produced, while the elephant numbers a hundred or more years. Now, seeing that the tissues are alike in all these creatures, the reason of their varying duration is a real puzzle. In man the average duration of age is more variable; sometimes we see an individual worn out and really old between fifty and sixty years, whilst another retains his vigour thirty years longer. Inheritance no doubt has much to do with longevity, and we cannot trace out the beneficial or hurtful conditions which tend to influence the duration of life; but there seems to be no *a priori* reason why it should not be prolonged considerably above that of the present period. It may be remembered that Buffon and Flourens, considering the different stages of growth in animals, came to the conclusion that the duration of life was five times that of youth. The latter is the period preceding the time of full development, which is marked by the occurrence of the complete osseous union of the epiphyses with the long bones. I remember seeing the skeleton of Jumbo, the great elephant in Barnum's exhibition, and observed that the epiphyses had not yet united to the shafts. He was said at the time of his death to have reached twenty-three years of age. If this were true he would not have completed his life at one hundred and fifteen. In man this union is said to take place in his twenty-first year, and therefore the correct age of man would be a hundred.

In reading of the great ages assigned to the early dwellers upon earth as given in the Bible it has never seemed to me an impossibility or an absurdity to suppose that human beings could reach a greater age than they do at the present day, and the Scriptural account gives no contradiction to such a view. There is nothing in the history or Jewish legend contradictory to the different stages of growth which I have mentioned; in fact, so far as the very brief account allows us to judge, it is quite in accord with what Flourens has taught. In a short-lived animal like the dog maturity is reached when the longer-lived man would be in his cradle. Now the proportion was still kept with the antediluvian. Were it recorded that the early dwellers on the earth reached their prime at the same time as we do at the present era, and then had lived a thousand years afterwards, I should have put the story aside as opposed to our knowledge of animal life; but it is very remarkable that the natural proportional stages of growth are preserved, the development, of course, being altogether slower. The principal fact mentioned in the lives of the patriarchs calculated to guide us is the time of their marriage and the birth of the first child. Now, if this be taken as the commencement of manhood, we see how this term is delayed, so that its proportion to the whole duration of life is preserved. Thus Seth lived to be 912 years of age, and his first child, Enos, was born when he was 105. Enos lived to about the same age, and his first child was born when he was 90. Methuselah lived to be 969 years, and his first child, Lamech, was born when he was 187 years old. Lamech lived to be 777, and begat his son Noah when he was 182. Noah lived to be 950, and it is said that his three sons were born to him when he was about 300. After the Deluge the duration of life was diminished by half, and the time of marriage was much earlier. Sarah was 90, and her husband Abraham about 100, when Isaac was born, Sarah having just come to the menopause. Thus it seems that we can take no exception to the Biblical account of the great age of man on the score of incongruity in his manner of growth, seeing that all the proportional stages of life were preserved until death arrived.

There seems to be nothing unscientific in the histories detailed, and at the present time we cannot say why man's life is limited to the period it usually attains, and why, under other conditions, it might not be prolonged. The question is one of some practical as well as speculative interest, as we know how health and life are influenced by our environments. There remains, of course, the great fact of continual change of growth and decay, which is the universal law, not only of our earth, but apparently of all celestial bodies. This fact we cannot get behind, nor can we, indeed, imagine any other mode of existence; it is the story of the world—

> "And so from hour to hour we ripe and ripe,
> And then from hour to hour we rot and rot,
> And thereby hangs a tale."

The great and prime object of our calling is the restoration to health of those who have departed from the standard. If by the alterations in their surroundings this is not to be accomplished we may find assistance in drugs. As regards their use I have often been called a sceptic. I scarcely know in what sense the word is used. I cannot overlook the fact of the great value of digitalis in heart disease, of arsenic in anæmia, and of several other drugs in special complaints. I have said no more than this, that to sit down in one's chair daily and write on a piece of paper the name of some drug for every ailment without exception which comes under our observation is in the present state of medicine an absurdity, and is simply a pandering to human weakness. I do not say that drugs are not useful in a moral sense. I am merely contending that the method is not scientific, as we usually apply this term. I know of no more successful practitioner than the late Sir William Gull, and his treatment was rational, but he did not credit any particular drug with the properties ascribed to it by the patient. His His prescriptions very often consisted of nothing but coloured water. I was reading a day or two ago in a popular journal of the success of a so-called "sixpenny doctor" at a cheap dispensary, where he saw on an average seventy patients during one evening. His favourite and almost universal medicine was a mixture composed of sulphate of magnesia, burnt sugar, and infusion of quassia. The merits of this were that it was cheap and produced an appreciable effect, for he went on to say, "You must always give medicines which produce appreciable effects; then, also, the mixture must taste like medicine, and if it have a bad smell the patient will be better satisfied." I do not think this

successful method of treatment has yet been taught in the medical schools.

I am anxiously looking forward to the time when we shall be able to boast of scientific therapeutics, and I accord all praise to the few men who are working at the subject, like Brunton, Leech, Fraser, and others, who have already shown how groups of chemical agents may by their constitution have some analogous action on certain tissues of the body, and have, moreover, proved by direct scientific processes the true operation of medicines. What I do object to is the attempt to treat cases of disease on principle when we possess no principles; we do not know sufficiently the action of drugs to do this, and we know less of the meaning or significance of symptoms which we treat. In these circumstances I maintain it is wiser to follow the empirical method and act on experience only. Take any disease you like and observe the consequences of acting on the quasi-scientific method. I take phthisis because it was when consulted in a case of this disease that I was charged with scepticism; and yet the doctor who did this entirely changed his method when he heard of the tubercle bacillus. Surely the sceptical mind is better than the one which is acting on wrong principles. If scientific therapeutics be dependent upon a better knowledge of the meaning of symptoms, surely the former must follow the latter; and therefore it is not wise to say, as is often done, that every branch of medicine is advancing except therapeutics. It seems to me that it goes on too fast, constantly changing with every fresh view of disease. If, to recur to phthisis again, the scientific method is by the use of antiseptics, how could this possibly have been suggested before the discovery of the tubercle bacillus? With the man who maintains that tubercle is nothing but carbonaceous matter inhalation of oxygen and various methods of expanding the lungs are for the moment the true scientific method of treatment. With the physician who maintains that tubercle is unassimilated albuminous matter, owing to a deficiency of pancreatic juice, the latter must be administered as the remedy. If tubercle be a parasite, then sulphuretted hydrogen and creasote are medicines warranted to cure it. It seems to me so obvious that, with an imperfect pathological knowledge and a considerable ignorance of the action of drugs, therapeutics cannot in its largest measure possibly be scientific. The cases where the *rationale* can be given for the use of any medicine can be numbered on the fingers. I cannot but repeat what I have said before, that in our present state of knowledge I hope we shall not have many more drugs, and am also thankful that many of those which we have, do not possess the attributes commonly assigned to them. I could illustrate what I mean by numerous examples, but will be content to take the one which came last under my notice. A gentleman who had a feebleness of movement and thickness of speech creeping over him became at last very rapidly hemiplegic. The case was evidently one (and as was afterwards shown to be correct) of softening of the brain. The medical man called in believed it to be apoplexy, from the quick occurrence of the paralysis, and on being asked what medicine he had given replied "ergot," as he always gave this in apoplexy. Now, considering that the patient's malady was due to diseased and obstructed bloodvessels, causing malnutrition of the brain, and that a medicine was given with the object of further contracting them, the result would obviously have been to increase the softening. Is it not, therefore, very satisfactory to feel that ergot has not yet been proved to have such a power over the cerebral vessels? And, sceptical as I am about its action, I cannot help thinking that the medical man who prescribed it, and others like him, must be still more sceptical; otherwise I cannot conceive how he could have slept composedly in his bed had he really thought that by a mistake in diagnosis he had assisted in shortening the life of his patient.

I am anticipating the day when there will be a system of true scientific therapeutics, but until that arrives I think we should rather be guided by our experience in the use of drugs than by any principles of our own concoction. One of the worst practitioners I have ever known was a man who had a reason for the employment of every medicine he prescribed. One example will suffice—viz., maltreatment of a case of whooping-cough by giving nothing but nux vomica, as he understood it was a nervous complaint. At present every man is a free lance, and treats his case according to his fancy. Should it be a case attended by fever, one medical man gives antipyrin to reduce the fever, and another digitalis to reduce the pulse, and so on. I think it is as well to remember that medicine stands on a different footing from most other sciences in this respect. These have grown step by step from the smallest beginnings until the present structure has been attained, while the development of scientific medicine has been by an opposite method — by a process of trimming, discarding, and purifying. It began as a superstition, covered and surmounted by fancies and crude theories. By getting rid of these advance has been made, but the fact is not yet sufficiently realised that many of the old fancies still remain in the profession. There was a time, as our old herbals show, when nearly every plant in the kingdom was supposed to have some medicinal value; the majority of these are now discarded, but still many remain. A very remarkable instance of the fanciful action of a vegetable on the system is the supposed diuretic effect of asparagus. I had long known it had no action of the kind ascribed to it, but seeing the old error perpetuated in modern books I made further inquiries on the subject, and the answers I received were without a single exception to the effect that asparagus had an inhibitory action on the kidney, so that it might be called an anti-diuretic. Those who answered my interrogations said that they had been in the habit of noticing this inhibitory effect; and some who were medical men stated that they had inquired of patients, and the latter replied in the same manner—that they had always observed the decreased amount of secretion after partaking of this vegetable, so that although my correspondents numbered only about twenty the observations made amounted to some hundreds. There could, therefore, be no mistake about the correctness of my conclusion. It is interesting to note how the delusion or mistake occurred. This is supplied by the fact that many of my correspondents could not refrain from mentioning the well-known odour which the secretion possesses after this vegetable has been eaten, which is said to be due to the production of succinic acid. Herein lies the explanation of its fallacious action. It must be in the experience of every medical man how instinctive is the feeling amongst people that the organs of the body must be in good working order for the preservation of health, and thus our patients so frequently complain that their digestion is weak, that their liver is torpid, or that their kidneys do not act sufficiently. The only organ which one hears is overworked is the brain. They then ask for something to rouse those organs into activity or to be promised some article of diet which shall produce the same result. Some persons take their food with direct reference to the bowels, others eat tomatoes and other vegetables as stimulating the liver, whilst most persons believe in the value of asparagus because it has such a "powerful action" on the kidneys. This is made known to them through the nose. There can be no doubt in their minds about this very powerful action; but whether for good or for ill, whether the vegetable stimulates or retards secretion, they do not stop to inquire—the effect is so evident. The French peasantry seem long ago to have discovered the truth, for finding the result not as expected they took to drinking the water in which the asparagus was boiled. I am told that this is the usual custom, and so the desired effect is obtained, for I suppose most medical men will agree that the best-known diuretic is water.

It would be amusing as well as instructive to call to mind some other strange fancies which influence the public, and even some members of our profession—for example, that dark things are stronger than light ones, whiteness corresponding to weakness, softness, or tenderness, so that a patient, after a long illness, should commence with the white meats on the assumption that veal or turkey are more digestible than mutton or game, or should fish be suggested he must begin with a little whiting. I have known a medical man insist strongly on his patients drinking "brown" sherry after an attack of influenza, laying great stress on the colour as indicating a better or robuster restorative. If he had inquired he might have discovered that the colour was due to burnt sugar. I sometimes hear also of the prohibition of "stone" fruits, as if cherries and greengages were more indigestible than strawberries or ripe pears, but it was the word "stone" which evidently petrified the brain. There are plenty of other fallacies not so glaringly obvious where we have allowed our fancies to guide us. I have said that one great method of advance in medicine is the getting rid of old theories, fancies, and superstitions in the same way as has been said by a great writer that in legislation more good has been done during the last century by abrogating bad laws than by the enactment of new ones. I am quite open to the evil effect which an idea of this kind may carry with it, and that in

the attempt to get rid of all that is false we are left at last with bare facts without any halo of human action around them. In our profession we are then apt to rest satisfied, sit down, and look at the natural course of events without interference; we look on and call ourselves expectants. Those who knock down are not usually the same as build up—the iconoclast is not the constructor; and therefore I should like to say for myself that, although I still see much to be got rid of, I have no doubt in the efficacy of medicines and other means to assist us in restoring to health our ailing fellow creatures, and believe that we shall make still further discoveries in the efficacy of drugs. I regard with the greatest honour the few, very few, men who in our country are studying therapeutics in the true scientific spirit. My strongest hope of medicine in the future lies in this direction, for it is evident that if the right administration of remedies implies a knowledge which study alone can give, and also a knowledge of the meaning of symptoms, the educated man alone can treat disease and the ignorant one must fall into obscurity, quackery will die a natural death, and the millennium of medicine will be at hand.

An Inaugural Address

ON THE

PREVENTION OF SMALL-POX.

WITH SPECIAL REFERENCE TO THE ORIGIN AND DEVELOPMENT OF THE STAMPING-OUT SYSTEM.

Delivered before the Medical Society of King's College, London, Oct. 26th, 1894.

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GENTLEMEN,—In tracing the history of various measures which from time to time have been recommended for preventing small-pox it will be necessary to refer to very early historical records, and I shall have occasion to dwell upon the history of the plague. I shall also draw your attention to the methods which have been adopted in this country to suppress the most formidable diseases of live stock. There are many points in which the plague and small-pox will bear comparison, but there is one very important fact in their history in this country in which they differ, for while the plague has entirely disappeared from Great Britain we have occasional outbursts of small-pox which serve to remind us that, although it continues to decline, it is still a disease which demands the closest attention.

ORIGIN AND SPREAD OF THE PLAGUE.

The origin of the true, or Oriental, plague is closely associated with putrefaction and filth in tropical climates. When it occurred in this country it was regarded as a foreign pestilence imported from the East, and, once imported, it was fostered and intensified in virulence wherever there were filth, putrefaction, and overcrowding. The plague, like small-pox, was communicable from one person to another. If a case occurred in a house other inmates were liable to suffer from the disease, while visitors to the house ran a similar but less risk. There was a good deal of variation both in the infectivity of the virus and in the susceptibility of individuals, so that one contemporary writer remarked that "no one can account for how it comes to pass that some persons shall receive the infection and others not." There were members of the medical profession who undoubtedly died from the plague, but medical men were nevertheless credited with enjoying an extraordinary degree of immunity. This tradition has been supported, to a certain extent, by the experience of the plague in modern times. In the epidemic in Egypt in 1835, of the ten French physicians engaged there only one died, and while those who buried the victims of this disease were liable to suffer from it—and many did so—the French medical men in Egypt made more than 100 post-mortem examinations without a mishap. The clothes and coverings of the infected often spread the disease, and yet there were numerous examples of persons who, without having adopted any method of protection, occupied the beds of plague patients without contracting the malady The plague was transmissible from one country to another by sea. An infected ship became an infective centre as readily as an infected house. Once imported, whether by land or sea, the virus from infected persons or merchandise spread wherever the environment was favourable for its development and extension.

OLD LONDON A SUITABLE ENVIRONMENT.

Let me now picture to you the state of Old London and of its inhabitants. Dr. Vivian Poore [1] has expressed the opinion that it is difficult to conceive a worse state of public health than that prevalent in Old London. The situation of the city was unhealthy, and the old town ditch was a receptacle for all kinds of filth. The houses were filthy, and the hovels of the poor were little better than pigstyes. They were not only unventilated, but the floors were strewn with rushes, which were seldom changed. Erasmus goes so far as to say that the rushes were piled the new upon the old for twenty years, and were fouled with spillings of beer, fragments of fish, expectoration, vomit, excrement, and urine. Well might we exclaim, in modern phraseology, What a splendid hotbed for the cultivation of pathogenic microbes. Nor were cleanliness and the use of clean linen encouraged by the beliefs prevalent at that time. Mr. John Allen, M.D., F.R.S., states, on the authority of several physicians, that not only "all soap-boilers and vendors of it, but all the washerwomen and all they whose business it was to use soap—nay, those who only wore shirts washed with soap—presently died in the plague." Another very striking insanitary feature of Old London was the overcrowded state of the graveyards, which was well calculated to predispose to pestilence, if not actually to breed it. We are told that the burials were so frequent in St. Paul's Churchyard that scarcely a new grave could be dug without bodies being exposed in all stages of putrefaction. The burial-ground was literally crammed with the dead, and the soil was appropriately described as fat and pestilential. And what can we say of the profession at that date? We have only to study the medical literature of the plague to acknowledge that ignorance and quackery were rampant. The people were intensely superstitious and regarded diseases as produced by unfortunate conjunctions of stars and appearances of comets. Their moral condition, marked by ignorance, vice, and brutality, was antagonistic to the most elementary principles of hygiene and rendered the adoption of sanitary precautions of the simplest kind an impossibility without State interference. And what opportunities there were for all classes of society to contract dangerous infectious disorders in those days, when dukes, lords, knights, and squires mixed with the mob, especially on Sundays, at places like the Spa Fields, to witness prize-fighting, bull-baiting, cock-fighting, and other amusements of a still more demoralising character. Even ladies patronised these entertainments and took their children with them "to teach them valour." Pepys in his Diary informs us that he took his wife to a bear-garden, but, be it remembered to his credit, he condemned the sport he saw there as "very rude and nasty pleasure." To sum up, the plague was imported into a filthy city and attacked an ill-nourished, drunken, and scorbutic people, and its victims were left to the mercy of ignorant physicians. After centuries of experience we have learnt that the necessary conditions for avoiding the plague are accurate knowledge on the part of the profession and the public of the way in which the disease spreads and the adoption of sanitary precautions. It was because there was the very reverse of sanitary precautions that the virus of the plague found in Old London a suitable environment and was thus enabled to obtain a firm hold upon the city, while at intervals other conditions, not so easy to define, fanned the flame and caused it to flare up with appalling intensity.

RISE AND PROGRESS OF PREVENTIVE MEASURES.

I will now turn to a brighter side of this subject and endeavour to trace the gradual evolution of modern preventive measures from the very earliest attempts which were made to avoid the plague. It is not until the sixteenth century that we hear of precautions of this kind being recommended in England. Early in this century all those who had the plague in their houses were ordered to put up wisps and to carry white rods in their hands. In 1543 the Plague Order of Henry VIII. was issued. In place of wisps the sign of the cross was to be made on every infected house and to remain

[1] London from the Sanitary and Medical Point of View. By G. V. Poore, M.D., F.R.C.P. 1889.

there for forty days. Persons affected with the disease were to refrain, if possible, from going out of doors, or for forty days to carry a white rod in the hand. In 1547 the means of notification was a blue cross, with the addition of the inscription, "Lord, have mercy upon us." Later the colour of the cross was changed to red. With the outburst of the plague in 1563 came an attempt to enforce a terrible system of compulsorily shutting up infected families. The doors and windows in such houses were to be closed, and no inmates were to leave the premises and no visitors to be allowed for forty days. What better incubator on a large scale could possibly have been devised for both breeding and intensifying the virulence of the plague bacillus, or whatever it may be, that constitutes the contagium vivum of this disease? This compulsory shutting up of the sick with the healthy amounted to a compulsory infection of many of the unfortunate inmates who might otherwise have escaped, and very naturally the order was frequently infringed. In 1568 the Lord Mayor of London drew up instructions for the aldermen for dealing with the plague. It was enacted that constables and officers should search out infected houses and report to the authorities—in other words, that there should be *notification by the police*. All infected houses were to be shut up, and no person was to be allowed to come out for twenty days. All bedding and clothing used by the victims were to be destroyed. In 1581 the Lord Mayor transferred notification from the police to searchers. Two honest and discreet matrons in every parish were to search the body of every person that happened to die in the parish. They were ordered to make a true report to the clerk of the parish, and the clerk had to report to the wardens of the parish. For failing to notify the penalty was an exemplary term of imprisonment.

The continued prevalence of the plague led to the publication in 1593 of a book by Simon Kellwaye.[2] One chapter "teacheth what orders magistrates and rulers of Citties and towns should cause to be observed." London had been for many years rapidly increasing, and was more than ever suffering from overcrowding. In 1605 there was a severe epidemic. The Court, the ministers, the magistrates, the wealthy, and, alas, the fashionable physicians deserted the city. The poorer classes were left to battle with the disease and all ceremonial was abolished, the dead being carted away and tumbled into pits. Various amulets were worn and antidotes taken to prevent infection. Dr. Thomas Lodge[3] (one of the few medical men who remained) recommended that small cakes of arsenic should be worn in the armpits. But what was much more to the point was his advice that discreet and skilful men should be appointed in every parish to notify sickness to the authorities, and so cause them to be visited by expert physicians, and that such as were sick should be separated from the whole. Lodge also recommended that isolation hospitals should be "situated without the Citty in a separate and unfrequented place and not so neere the high-wayes or walkes of the Citizens, as it is for feare lest the Passengers should be infected." In 1625 the disease again broke out, and the parishes attacked were those with dirty lanes and narrow passages separating the miserable dwellings of the poorest of the poor. A similar experience occurred in 1636. In 1665 we come to the history of the Great Plague of London. It was attributed by some to the importation of an infected bale of silks from the Levant. Again there was a general exodus of the well-to-do, and the President and most of the Fellows of the College of Physicians ran away. Deaths increased daily and business was stopped. On Sept. 4th, 1665, Pepys wrote from Woolwich to Lady Carteret: "I have stayed in the City till about 7400 died in one week, and of them about 6000 of the Plague, and little noise heard day or night but tolling of bells." The College of Physicians published recommendations for the prevention and cure of the plague. Among these recommendations we find that "such as were tied to necessary attendance on the infected, as also such as live in visited houses, should cause issues to be made in their arms or legs, or both, as the Physician shall think fit." Amongst the physicians who stayed and faced the plague was a Dr. Hodges,[4] who afterwards wrote an account of his experiences. According to him the disease stayed among the common people, and hence was called the "poor's plague." He criticised the system of shutting up infected houses, and strongly recommended that those who were untouched in infected houses should receive "proper accommodation out of the city." The sick were to be removed to convenient apartments provided on purpose for them. To quote his own words: "Timely separation of the infected from the well is absolutely necessary to be done." For the purification of houses his directions were to place "a chafing dish in the middle of the room, where proper things were burnt and exhaled all around." The use of sulphur and quicklime was mentioned. Again, we read of amulets being extremely popular. Walnuts filled with mercury, arsenical amulets, and dried toads were very generally worn. Hodges preferred the orthodox method of the College of Physicians, and wore an "issue" as a preventive. "The more of these little ulcers are made the better, although their largeness may answer as well as more in number—that is, if they are big enough to hold four, six, or eight peas together. If anyone hath a mind for two issues, let one be made in the left arm and the other in the opposite leg." From these points of minor professional and antiquarian interest we will turn to the preventive measures which were drawn up and published by the Lord Mayor and aldermen. Examiners in health, watchmen, and searchers were appointed. *Surgeons were selected to assist the searchers in making their reports, and a fee of twelve pence was allowed for every case.* The disease was immediately notified to the examiner of health. Rules for disinfection were made, and every infected house was shut up and no one removed except to a pest-house or tent. Orders were issued for cleaning and sweeping the streets. Hackney coaches were not to be used after conveying patients to the pest-house until they had been well aired. Regulations were also made dealing with loose persons and assemblies, and all tippling-houses were closed at nine o'clock. The plague was scarcely over before the whole city was in flames—a calamity which ultimately proved to be an incalculable blessing. "The citizens," said Henry Oldenberg, writing to the Hon. Robert Boyle, "instead of complaining, discussed almost of nothing but of a survey for rebuilding the city with bricks and large streets." Plans were submitted by Sir Christopher Wren, Sir John Evelyn, and others, and a new city speedily rose upon the ashes of Old London. A few sporadic cases of plague are given in the London bills of mortality down to 1679, when they finally ceased. London was sterilised by the Great Fire. "Great as this calamity was," wrote Thomas Pennant, "yet it proved the providential cause of putting a stop to one of far more tremendous nature. The plague, which for a series of ages had, with very short intervals, visited our capital in its most dreadful forms, never appeared there again after the rebuilding of the city in a more open and airy manner, which removed several nuisances, which, if not the origin of a plague, was assuredly one great *pabulum* when it had seized our streets."

[2] A Defensative against the Plague. London, 1593, 4to. Simon Kellwaye. [Brit. Mus., C. 21, e. 8.]

[3] A Treatise of the Plague. London, 1603, 4to. Thomas Lodge. Brit. Mus., C. 21, e. 6.

[4] Loimologia. London, 1720. Hodges. Brit. Mus., 1167, e. 25.

MEAD ON SUPPRESSION OF THE PLAGUE.

In the years 1720–22 there was a terrible outburst of plague in France. It was attributed at Marseilles to importation by a ship from Syria. This caused a panic in England, and the Lords Justices considered it necessary for the public safety that measures should be taken to defend the country from a fresh invasion of this disease. Dr. Richard Mead was entrusted with drawing up the required recommendations. He laid it down as an essential doctrine that the plague was not native to this country, and therefore the first thing was to prevent importation, and if such a misfortune occurred it was to be prevented from spreading. How was this to be accomplished? Briefly stated, his system was as follows. Lazarettos were to be provided for the reception of infected men and merchandise. The healthy were to leave their clothes and to be kept in quarantine, and the sick were to be kept remote from the healthy and their clothes destroyed. The shutting up of infected houses was condemned in the strongest terms, and a system of notification and isolation was proposed on the lines originally suggested by Dr. Hodges.

1. *Council of Health.*—A Council of Health was to be established and entrusted with such powers as might enable them to see all their orders executed with impartial justice.

2. *Notification.*—The ignorant old women employed as searchers were to be replaced by understanding and diligent men, who were to report cases immediately to the Council of Health.

3. *Isolation.*—Physicians were at once to be despatched to visit the suspected cases, and if the suspicion of plague was confirmed all the families in which the sickness occurred

were to be isolated. The sick were to be separated from the sound, and isolation houses to be provided three or four miles out of the town. The poor were to be isolated in houses provided for the purpose, but the rich were to be allowed to be in their own homes provided that care was taken to separate the healthy from the sick, and no pains were to be spared to provide clean and airy apartments. All expenses were to be paid by the public, and a reward was to be given to the person who made the first discovery of infection in any place. Dr. Mead further pointed out that general sanitation must be carefully attended to. Officers were to see that the streets were washed and kept clean from filth, carrion, and all manner of nuisances. Beggars and idle persons were to be taken up, and such miserable objects as were fit neither for the hospitals nor for the workhouses were to be provided for in an establishment for incurables. Houses also were to be kept clean, and sulphur was to be used as a disinfectant. Drs. Hodges and Mead were undoubtedly great sanitary pioneers, and fortunate indeed would it have been for this country if their recommendations had been modified and enforced with a view to preventing small-pox, which was now gradually taking the place of the plague. What circumstances could have arisen to interfere with the adoption of similar measures for promptly suppressing and for preventing a fresh importation of small-pox? Before answering that question I will ask you to turn your attention for a few moments to the origin and progress of this disease.

ORIGIN AND PROGRESS OF SMALL-POX.

Small-pox is undoubtedly a disease foreign to this country. It was imported from the East, probably from Egypt. Herodotus, who visited Egypt, leads us to infer that epidemics were unknown there during the reign of the Pharaohs; but Egypt undoubtedly became a hotbed of pestilence during the Mahomedan occupation. Prosper Alpinus imagined that both the plague and small-pox were concocted by the putrid waters of the Nile, but he would probably have been more correct if he had suggested that they arose from the insanitary condition of the Arab conquerors and their filthy camp followers, who did their best to destroy all that remained of that magnificent civilisation which had existed in the days of the ancient Egyptians. We do not know the exact period at which small-pox was first imported into England, and the records of this disease are very meagre until the sixteenth century. In 1593 Simon Kellwaye appended to his work on the Plague a short treatise on Small-pox. "Oftentimes," he wrote, "those that are infected with the plague are in the end of the disease sometimes troubled with the small pocks or measels, as also by good observation it hath been seen that they are fore-runners or warnings of the plague to come."

SEVENTEENTH CENTURY: PERIOD OF IGNORANCE AND APATHY.

Small-pox steadily increased in this century until it came to be regarded as a formidable scourge; and yet no advantage was taken of all the experience which had been gained in dealing with the plague. No public measures were adopted to cope with the disease, and the people came to regard the new pestilence as a visitation from God which was unavoidable. Yet this was the century in which the great Sydenham lived. Sydenham was unquestionably a great physician, though it was not until after his death that his services to medicine were fully appreciated. His observations clinically were of the greatest value, and he revolutionised the treatment of small-pox, but his views upon the causation of epidemics were in the next century severely criticised by Dr. Haygarth. "The first introduction and continuance of the small-pox," wrote Haygarth, "were to be attributed to an ignorant and barbarous age, but the next cause of perpetuating the calamity was probably to be ascribed to the hypothesis of a physician distinguished in the highest degree for his knowledge and sagacity." Haygarth asserted that "Sydenham's hypothesis was accepted with universal assent by physicians for above a century, not only in this but in every other country illuminated by the light of science." According to Sydenham, the pestilential, variolous, morbillous, and other contagions were attributable to a peculiar constitution of the air, and Haygarth maintained that "while such an opinion prevailed not the wildest visionary could ever entertain the hope of retarding the progress of small-pox except by prayers and by recourse to the merciful interposition of Providence." "It is astonishing," he adds, "what implicit confidence this pernicious doctrine has obtained, though positively contradicted and disproved by facts which lie open to every observer."

EIGHTEENTH CENTURY: PERIOD OF VARIOLATION.—HAYGARTH'S SYSTEM.

The eighteenth century brings us to the adoption by the profession and by the public of an entirely different method of preventing diseases. I have not time to discuss the practice and results of the system of small-pox inoculation, and I have dealt with that subject elsewhere. I only wish to remind you that the method of *protective inoculation* was derived from the East, where it had been in use from time immemorial. An attack of the disease was artificially induced to protect against the danger of infection in the natural way. The operation was performed in different ways in different countries, but the method which was ultimately most generally adopted was to take lymph from a mild case of small-pox and insert it in the arm with a needle or a lancet in two or three places, though one successful puncture was as efficacious as half a dozen. Lady Mary Wortley Montagu, wife of the Ambassador at Constantinople, brought this practice to notice in 1717, and Mr. Maitland, a surgeon, inoculated her infant in England in 1721. Then the practice was taken up by the profession, and a great controversy arose between inoculators and anti-inoculators, in which the clergy took a prominent part; but the method gradually found favour, the people were willing to be inoculated, it was a most lucrative business, and, all opposition being swept away, it became established as the orthodox method of the profession for preventing small-pox. It was introduced in London in 1721, very generally practised after 1740, and prohibited by Act of Parliament in 1840. The penalty for infringing the Act is one month's imprisonment. Small-pox inoculation, or variolation, protected the individual when genuine small-pox was produced and endangered the community. Persons inoculated became centres of infection and conveyed the disease to others. Haygarth, although in favour of inoculation, strongly condemned its use without precautions to prevent the spread of the disease. "The most serious and solid objection," he wrote, "that has been advanced against inoculation is deduced from a comparison of the bills of mortality for a series of years in various places. They show that a larger proportion of inhabitants has died of the small-pox in towns where it is practised than in the same before it was known, or in others where it is prohibited." Even Dr. Dimsdale, an ardent inoculator, admitted that more lives were lost in London than before inoculation commenced, the community at large sustained a greater loss, and the practice was more detrimental than beneficial to society; and he added: "The disease by general inoculation throughout London spreads by visitors, strangers, servants, washerwomen, doctors, and inoculators, by means of hackney coaches in which the sick are sent out to take the air, or by sound persons approaching them in the streets. The poor in London are miserably lodged; their habitations are in close alleys, courts, lanes, and old dirty houses; they are often in want of necessaries, even of bedding. The fathers and mothers are employed constantly in laborious occupation abroad and cannot attend the inoculated sick." This disappointing result led to a widespread demand for some new method for dealing with small-pox. It induced Haygarth to turn his attention to this subject, and towards the end of the century to bring before the profession and the public his plan for stamping out the disease. Haygarth, who was a close observer and an able physician, studied the question of the communicability of the disease from one person to another, and its conveyance by infected clothing and other means, and ultimately drew up rules and regulations for its prevention, the importance of which we are only now beginning to fully acknowledge. Haygarth's essential doctrine was "that mankind was not necessarily subject to the small-pox, and that it was always caught by infection from a patient or the poisonous matter" and might be avoided by observing his "Rules of Prevention." These rules comprised a regular system of notification and isolation. Inspectors were to be provided to report cases of small-pox, and people were to be rewarded for carrying out the instructions. Several examples were given of the results at Chester, where the plan was adopted. Haygarth met with considerable encouragement from some of the leaders of the profession. Dr. Fothergill wrote to him in 1778, saying: "I have mentioned the intention of freeing this country from the small-pox to divers of the faculty, and shall continue to do so as it falls in my way. The

proposal is variously received, but in exact proportion to their humanity."

In 1793 Haygarth made considerable additions to his rules and urged that legislation should follow to make them compulsory. Provision was to be made to reward the poor for observing the rules, and public thanks to the wealthy were to be published in the parish churches and newspapers. Transgression of the rules was to be punished by a fine of from £10 to £50, one half to go to the informer and the other half to the fund which supplied the expense of rewards to the poor, and all details were to be supplied to the Press. It was further suggested that Great Britain should be divided into districts including a certain number of parishes or townships, and that to each of them a surgeon or apothecary should be appointed as inspector to see that the regulations were exactly observed. In addition, there were to be directors of inspectors superintended by a commission of physicians in London and in Edinburgh. All salaries were to be paid by the county rates, and the rewards for observing the rules of prevention were to be guaranteed out of the parish funds. On the requisition of the director and inspector of a circuit power was to be given to two or more justices of the peace to appoint a separate house for the reception of patients affected with small-pox. In conclusion Haygarth maintained that the plague had been completely exterminated from this country for above a century by civil regulations, and that the small-pox was propagated on principles similar to the plague, and that it also might certainly be exterminated from this island. Haygarth's teachings had a profound influence upon both the profession and the educated public, but his system of compulsory notification was never carried out, for no legislation followed to enforce his recommendations. This is a matter deeply to be regretted, for towards the end of the eighteenth century small-pox was declining in London; general sanitation was making rapid advances; small-pox inoculation, which had created fresh centres of infection, was falling into disfavour; small-pox hospitals were built, which served to limit centres of infection; and the profession and the public were influenced by the teaching of Haygarth with regard to the various ways of avoiding the spread of the disease. I venture to think it only required the compulsory adoption of Haygarth's system uniformly all over the country to have kept the disease in control, if not to have entirely extirpated it from Great Britain. To ascertain the reason why there was not legislation upon the lines recommended by Haygarth we must turn to the history of vaccination.

NINETEENTH CENTURY: VARIOLATION SUPERSEDED BY VACCINATION.—REVIVAL OF THE STAMPING-OUT SYSTEM.

I have referred to the widespread adoption of variolation and the general dissatisfaction which was felt with this method towards the latter part of the eighteenth century. It was at this juncture that a country practitioner, Edward Jenner, suggested in his pamphlet, published in 1798, that a new lymph, derived from the horse or the cow, should be substituted for variolous lymph. Jenner pronounced the new lymph to be protective for life, and it was undoubtedly incapable of spreading small-pox. Many continued to prefer the old method of inoculation, but the admitted danger of small-pox lymph was such a strong argument in favour of the new lymph that vaccination was adopted by a not very critical profession and by a confiding public ever craving for novelties, and especially new cures. For a time the two methods were practised side by side. The advocates of vaccination then began to wage war upon the inoculators, for they realised that vaccination could not make headway until its rival had been driven out of the field. Many who had supported variolation in the old days now roundly abused the practice, until ultimately the method which had been for a century the orthodox treatment of the profession became a criminal offence. The advocates of vaccination promised everlasting security against small-pox, and as a grand and final result the complete extirpation of the disease. Such a simple method completely eclipsed the elaborate scheme devised by Haygarth, and I have no hesitation in saying that the enthusiastic adoption of the Jennerian lymph blocked the way to much-needed legislation. But, although Haygarth's scheme never ripened into legislation, there were not wanting those who were loth to abandon his recommendations in favour of the new inoculation. Even Dr. Willan, in his book on Vaccine Inoculation, wrote as follows in 1805: "A general plan for extirpating the small-pox and for preventing its future diffusion among us surely merits consideration much more than any palliative method of superseding the disease or of mitigating its severity. ..... While we defend ourselves against the introduction of pestilential diseases from the Mediterranean, or of the yellow fever from America, we supinely preserve among us a contagious distemper originally exotic."

This is about the last we hear of Haygarth's plan. The literature of small-pox became almost entirely monopolised by the subject of vaccination. It is true that small-pox, which began to decline before vaccination was introduced, continued to do so, and there was no epidemic for many years, but that this was due to vaccination, or that vaccination is capable of extirpating the disease or of controlling epidemic waves, is absolutely negatived by the epidemic in 1825 and the epidemics which followed in quick succession in 1838 and in 1840–41, 1844–45, 1848, and 1851–52. Vaccination was made compulsory in 1853, but epidemics followed in 1854, 1855, and 1856, in 1859–60, and in 1863, 1864, and 1865, culminating in the terrible epidemic in 1871–72, with more than 42,000 deaths. Further epidemics followed in 1877 and 1881. Among recent examples we may take the now historical epidemic in Sheffield. It was calculated that 98 per cent. of the population were vaccinated, and yet there were 6000 cases of small-pox, at a cost to the local authorities of £27,000, while the pecuniary loss to the town was enormous. This is a terrible result, and occurred in a town reported to be one of the best vaccinated in the United Kingdom. Reverting for a moment to the history of these epidemics and the disappointing results of vaccination, we find in 1868 Sir James Simpson boldly stating that "isolation is the chief and leading measure required to stamp out small-pox." Sir James Simpson spoke approvingly of the Sanitary Act of 1866 for England and Ireland, but he regarded the Public Health Act of Scotland, 1867, as a more excellent measure. The Scottish Act erected a number of local boards everywhere throughout Scotland. These local authorities were entrusted with the power of appointing sanitary inspectors and medical officers under them, and were themselves under the control and advice of a Board of Supervision. They were bound to provide district hospitals or temporary places for the reception of the sick, to remove by suitable carriages any persons suffering from contagious or infectious disorders, in case of need to direct the sick not to be removed, but to remove all other unaffected persons surrounding them, providing suitable accommodation for those unaffected, and to have in each district all necessary apparatus and attendants for disinfection of woollen and other articles, clothing or bedding, which may have become dangerous from contact with diseased individuals.

"Such powers," wrote Sir James Simpson, "are of the highest importance for the protection of the general community against small-pox and other such infectious diseases among the poorer classes of the population." But more than this was required, and Sir James Simpson eloquently pleaded for compulsory notification. "It would surely not be reckoned too hard a measure for the public safety that every householder should by himself or through his medical attendant be obligated by the Legislature to report upon the existence of any case of small-pox that might appear in his establishment. In the same spirit every medical practitioner might be bound to report immediately any example of the disease that he met with in practice; all, or almost all, cases of small-pox could thus be brought under official notice comparatively early in the progress of the malady." Sir James Simpson continued as follows: "Our present sanitary laws are, in relation to the poorer classes, defective in their powers of stamping out infectious diseases merely, and mainly in as far as they do not enforce the isolation of the sick by due cautions after they are lodged in hospitals or in houses for their reception"; and in illustration of his views he added: "Measures of quarantine and isolation have been tried elsewhere in the British dominions and found to answer. At the various ports of South Australia all entrance to those affected and capable of spreading small-pox has been so well guarded against that in only one instance, as mentioned to me by Dr. Grainger Stewart, has the disease spread landward into the city of Melbourne, in consequence of an individual getting into the town through the misrepresentation of the captain and surgeon of the ship in which he arrived. He inflicted the disease upon nearly twenty of the residents. The authorities then interfered, placed all the affected in an inland quarantine station, and the disease spread no further. *Thus the malady was at once stamped out.*"

Leicester was one of the towns which suffered severely

from the 1871 epidemic. It was a well-vaccinated town, and yet in 1871–73 there were 6000 cases of small-pox and 360 deaths. Leicester's faith in vaccination was rudely shaken, and opposition to the compulsory law rapidly increased. In 1886 all attempts at compulsory vaccination were finally abandoned. The Leicester authorities obtained in 1879 power to enforce immediate notification, and a system of isolation was introduced. The result could not be more fairly stated than in the words used by the medical officer of health, Dr. Priestley, who prefaced his annual report for 1893 to the sanitary committee with the following remarks: "You are entitled to great credit—more especially in the case of small-pox, which, by the methods you have adopted, has been prevented from running riot throughout the town, thereby upsetting all the prophecies which have again and again been made. I need only mention such towns as Birmingham, Warrington, Bradford, Walsall, Oldham, and the way they have suffered during the past year from the ravages of small-pox, to give you an idea of the results you in Leicester have achieved, results of which I, as your medical officer of health, am justly, I think, proud."

Small-pox has been imported into Leicester over and over again, especially by tramps,[5] and, crude though the measures adopted there may be, and however much we may wish for more complete and better organisation, no one can deny that they have been most effectual in suppressing the disease. The opponents of the Leicester system and the advocates of compulsory revaccination will be found to explain these epidemics of small-pox by the assertion that it is not a question merely of vaccination, but of the number, size, and quality of the marks. I confess that I have no faith in the theory of marks, for vaccine lymph will produce on individuals of different ages and different constitutions and different nationalities no less than seventy varieties of marks. The discussion of these matters would, however, lead me beyond the limits of this address, and for the elucidation of these points and the vexed question of immunity in individuals as the result of vaccination I must refer you to the reports of the Royal Vaccination Commission. But while the vaccination controversy has been steadily growing in interest we have been controlling small-pox by means of sanitary legislation. I refer to the various Sanitary Acts such as the Public Health Acts for England and Wales, for Scotland, and for Ireland; the Epidemic and other Diseases Prevention Act; the Public Health Amendment Act; the Labouring Classes' Dwellings Acts; the Housing of the Working Classes Act; the Public Health (Ships) Act; the Local Government Board Act, and various Orders and Memoranda of the Local Government Board; the Infectious Diseases Notification Act; the Infectious Diseases Prevention Act; and the Public Health (London) Act.

By the Public Health Act of 1875 England was divided into urban and rural sanitary districts, and powers were given to enforce regulations of the Local Government Board for guarding against the spreading of infectious diseases; to provide medical aid and accommodation for infected persons; to promote cleansing, ventilation, and disinfection; to provide hospitals; to provide for destruction or disinfection of infected bedding, clothing, and other articles; and to appoint medical officers of health. With regard to the Notification Act of 1890, the opposition to it, and the final triumph of its supporters, I do not think I can do better than quote *verbatim* from a special article which appeared in the *Times* of Nov. 2nd, 1892: "Considering that Mr. Ritchie's measure has been in existence for less than three years, the extent to which it has been adopted by sanitary authorities all over the country is really astonishing. There were at first all sorts of objections to its principle and dismal forebodings as to its effect. ..... Happily, all these objections have been found by experience to be without foundation. ..... Finally, the objection that it would involve the compulsory removal to the hospital of persons attacked is disposed of by the answer that, in the first place, it confers on authorities no additional power except that of acquiring information, and, in the second place, that the advantages of hospital over home treatment in cases of infection are now so generally recognised by all parties that the question is not how to compel patients to go to hospital, but how to provide sufficient accommodation for those who are anxious to obtain admission."

[5] The cases of small-pox in Leicester in 1892–93 were started by a vaccinated tramp, and there were eleven separate introductions of the disease into the borough by tramps, while seventeen tramps in Leicester contracted it.

As to the value of notification in the metropolis we have the evidence of the Metropolitan Asylums Board. In their report for 1889 we read in reference to the diminution of small-pox: "These very satisfactory results confirm the view taken by the committee two years ago to the effect that the rapid and systematic removal from crowded districts of infected persons, each of whom might have become a centre of contagion, is an important factor in stamping out small-pox from the metropolitan population. The notification of cases will also greatly facilitate the action of the managers in this direction." Quite recently we have had the most striking confirmation of these statements and a veritable triumph for the advocates of notification and isolation. In July last an outbreak of small-pox occurred in Marylebone. It appears from an account which was given in the Press that on Monday, July 23rd, 14 cases were reported to the Metropolitan Asylums Board and were promptly isolated. On the Tuesday there were the same number, on the Wednesday they rose to 37, next day the number fell to 31, being followed by 10, 12, 1, and 1 on the succeeding days. Thus, by the promptness and energy of the officials of the Board this outbreak was suppressed in a few days by means of notification and isolation. Yet another blow has been dealt to small-pox by the Isolation Hospitals Act of 1893. Lord Thring's Act gives power to county councils to provide or cause to be provided an isolation hospital in any district within their county. Lastly, the Local Government Act of 1894 provides for the formation of district councils, and the urban sanitary districts and rural sanitary districts are to be called urban and rural districts respectively. The powers, duties, and liabilities are principally those which were conferred by the Public Health Act of 1875. It is an extraordinary fact that in the text-books of medicine no reference is made to the influence of all these Sanitary Acts upon the existence of small-pox and its prevention. The student is taught that small-pox has declined since the introduction of vaccination, and there the matter is left.

THE STAMPING-OUT OF ANIMAL PLAGUES.

I wish to further illustrate the stamping-out system by referring to the communicable diseases of live stock which may be compared with human small-pox, and to the preventive measures which have been effectual in getting rid of them. The cattle plague, which is also known by the name of "cattle small-pox," was imported into England from abroad. When it was introduced into London dairymen and stock-owners made no attempts to prevent the extension of the disease. The losses were terrible, and an Order in Council was passed in July, 1865, directing dairymen and others to notify outbreaks of any contagious or infectious disease among the animals under their charge. A veterinary department of the State was formed and inspectors were appointed in various parts of the country. A short Act was passed in February, 1866. A stamping-out system, consisting of compulsory notification and the slaughter of diseased animals, was soon brought to the notice of the public. There was violent opposition, but, nevertheless, after some delay the system was carried out. The number of cases of cattle plague had reached 18,000 weekly, and on the introduction of the stamping-out system the disease rapidly declined. Vaccination was recommended by members of the medical profession, but it was absolutely futile, and after a few attempts it was discountenanced. The disease was again imported into Great Britain in 1872. There were outbreaks in 1877, and ever since that year the disease has been kept out of the country.

There is another disease of stock which resembles small-pox in man; I refer to sheep-pox. It was imported into this country in 1847, 1862, and 1865; active measures of suppression were at once taken, and the diseased flocks were isolated and diseased animals killed and buried, and whenever these measures were adopted the disease did not spread. It was imported again in 1866, and again the disease was stamped out. Since 1866 we have been absolutely free from epidemics of this disease, although foreign sheep were landed suffering from sheep-pox in 1868, 1869, 1870, 1871, 1875, 1876, 1878, and 1880. Foot-and-mouth disease was another formidable animal pest in this country. It was imported in 1839. It has since been successfully dealt with by the stamping-out system, although in this case the system is much more difficult to apply. In the reports of the Board of Agriculture we learn that "perfect isolation and effectual disinfection have proved equal to the complete control of the spreading of the infection and the final extinction of the

disease." These facts I have brought to the notice of the Royal Vaccination Commission, and I have laid considerable stress upon them. I maintain that prompt isolation in the case of human small-pox is as efficacious in stopping the spread of the disease as the use of the pole-axe in cattle plague. Thus, three great animal plagues, which may be compared with human small-pox, have not only been suppressed but driven out of this country by the stamping-out system. The distinguished veterinarian, Professor Brown, of the Veterinary Department of the Board of Agriculture, has been mainly responsible for carrying out this system, and not only does the extermination of these plagues from this country form one of the brightest pages in the history of the veterinary profession, but those interested in the farming industry will acknowledge that it constitutes one of the triumphs of the sanitary legislation of the nineteenth century.

CONCLUDING REMARKS.

In conclusion, I will only remark that as the result of studying the epidemiology of small-pox and the preventive measures which have been in favour from time to time, and of studying also the methods of the Board of Agriculture, I have ventured to urge upon the Royal Vaccination Commission the necessity of relying upon a stamping-out system to exterminate small-pox from this country. If the Local Government Board would only exercise as much energy in dealing with small-pox as with Asiatic cholera I believe we should get rid of the disease in six months. But it almost appears as if the medical department of that Board dreaded to take the initiative in carrying out any measures which might be interpreted as an admission that the vaccination policy of the department had been a failure. We must therefore look to those outside the Board to introduce the necessary reforms, and I earnestly hope that such will be the final result of the prolonged labours of the Royal Vaccination Commission. I can see no reason why the Government of this country should not enter into friendly negotiation with the Governments of other countries, so that there might be concerted action to prevent a preventable disease like small-pox. Much good might result from the formation of a permanent International Board of Health. If civilisation is not yet sufficiently advanced to admit of a system of international notification, our consular authorities should be instructed to give immediate notification of the existence of small-pox in other countries, and every measure should be enforced to diminish the possibilities of importation. The duties of a Central Health Office, presided over by a Minister of Health, should include the collection of information as to the existence of small-pox in other countries, and details should be published in the annual reports of the department. Regulations, for example, for dealing with the importation of rags from small-pox stricken places should be enforced, as in the case of cholera; and if, in spite of these precautions, isolated cases occurred in this country they should be promptly dealt with.

Notification should be enforced uniformly all over the country, and in these days of special messengers, telegraphs and telephones, and morning and evening papers there is not the slightest reason why the authorities and the public should not immediately receive information of the existence of small-pox, while to procure immediate isolation we have only to imitate the splendid ambulance system of the Metropolitan Asylums Board. To procure prompt notification there must be no loophole for evading the Act, and medical men and householders should be liable to a heavy penalty, say £50, for failing to notify not only small-pox but *any case which may reasonably be supposed to be one of small-pox*. The police also should be required to report any case of small-pox in common lodging-houses or "shelters"; they should have power to require any tramp suffering from small-pox, or from any disease which may reasonably be supposed to be small-pox, to be examined by the medical officer of the union and kept under observation or transferred at once to the isolation hospital; and inmates of the workhouse should be daily inspected and no case allowed to leave if there be the least suspicion of small-pox infection. Objections no doubt will be raised to this proposal, but the frequency with which small-pox is spread by tramps fully justifies these measures, and especially that of making use of the police, who in these days of ambulance instruction may be regarded as a valuable auxiliary hospital corps. All these measures should be carried out as a matter of routine and without the semblance of panic.

Isolation should be uniformly enforced all over the country, and it should be compulsory upon county councils and local sanitary authorities to provide isolation hospitals. It would, therefore, be a great advantage if Lord Thring's Act were speedily amended to this effect. One of the terms of reference of the Royal Vaccination Commission is to inquire "what means other than vaccination can be used for diminishing the prevalence of small-pox, and how such means could be relied upon in place of vaccination." This must not be interpreted as indicating that protective inoculation as a voluntary measure might or should be abolished. There are many who have confidence in vaccination. No doubt the best plan is to select nurses and other attendants whose duties bring them into contact with small-pox from those who have recovered from an attack of the disease, and, failing this, they might, with good reason, prefer to be inoculated, with due precautions, with small-pox lymph; but the compulsory inoculation of every member of the community with any kind of lymph or vaccine is in my opinion not only unnecessary but unjustifiable. Quite apart from the question whether vaccination affords a transient immunity or is of no more value than are "issues" to protect against the plague, one thing is quite certain—namely, that as now enforced it falls with considerable severity upon the poor.

Vaccination is not a thing to be lightly undertaken in any case, and the conditions under which the infants of the poor are vaccinated are very unfavourable. Where there are no nurseries, no home comforts, and where often the mothers are unable to attend to their children, we must not be surprised at opposition, if even the result be only a sore arm.[6] The communication of syphilis has been minimised and even denied by the profession in the past; but Mr. Hutchinson's cases and the candid reports of Continental vaccinators have settled the question. And not only may erysipelas, skin eruptions and severe ulceration, and complications causing prolonged ill-health occur, but even death may ensue. Thus in the Registrar-General's reports for 1877, 1878, 1879, and 1880 there were 26, 35, 31, and 32 deaths, respectively, from erysipelas after vaccination; and when the entry was changed to "cow-pox and other effects of vaccination" the numbers increased in the next four years to 56, 65, 51, and 49, averaging about one death a week. It is a grave mistake, in my opinion, for any form of protective inoculation or medical treatment by means of vaccines or antitoxins to be enforced by the State; but in the case of sanitary regulations, which may inconvenience a few individuals while protecting the whole community, enforcement by the State is fully justified. Compulsory vaccination blocks the way to the development of a complete stamping-out system; but I venture to think that it will soon be abolished and compulsory notification and isolation substituted, and that additional precautions will be taken to prevent the importation and spread of the disease. If it be dangerous to prophesy, we may at least hope that the chronicler of the twentieth century will be able to say that the sanitary progress of the nineteenth century and the uniform adoption of the stamping-out system culminated in the complete extinction of small-pox in Great Britain.

THE PULSE IN AORTIC STENOSIS.

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THE fact that the auscultatory sign associated with aortic stenosis—a systolic murmur loudest in the aortic area and conducted onwards in the course of the circulation—is frequently met with in cases of dilatation of the aortic arch, in which the orifice, far from being diminished in size, is actually increased, as well as in cases in which the orifice may be presumed to be normal in size, as in anæmia, renders of special value any diagnostic aid afforded by the condition of the pulse in the disease under consideration. It must further be borne in mind that, even in cases in which the auscultatory sign in question bears witness to obstruction, such obstruction may be, on the one hand, altogether trifling, or, on the other, very considerable. It is the object of the following paragraphs to consider the aid in the diagnosis of aortic stenosis which may be supplied by a study of the pulse. It has usually been taught that there are two varieties of pulse

[6] It is reported that in one district alone in East London no less than 9000 summonses await hearing, and that the local authorities of Mile-end Old Town are now sending a petition to the Queen.

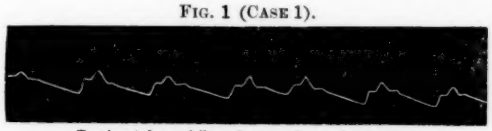
associated with narrowing of the aortic orifice—pulses which for shortness may be distinguished by the terms "anacrotic" and "bisferiens" respectively. By the finger and sphygmogram alike the features of these two pulses are easily recognised. Regarding the sphygmogram, it is seen that in the former pulse the tidal wave forms the summit of the curve, while the percussion wave is only indicated by a slight notch in the upstroke, the latter itself sloping instead of being perpendicular. The dicrotic wave is usually ill developed. It may be inferred from these characters of the sphygmogram what will be the sensations conveyed by the finger placed on the artery; the beat slowly reaches its maximum, which it as slowly relinquishes, and "ictus" is peculiarly deficient. The bisferiens sphygmogram is very different. It is characterised in brief by a double apex, both peaks being sharp and angular, and attaining the same altitude or nearly so. The dicrotic wave is usually deficient, but may be well marked, especially when the aortic notch is situated near the respiratory line. The impression conveyed to the mind by the finger placed on the bisferiens pulse is, again, very characteristic; the double stroke represented by the double apex of the curve is easily felt. The pulse, in fact, feels very much like a pronounced dicrotic one. It is the sphygmograph which informs the observer of the difference, showing that the second stroke represents the tidal and not the dicrotic wave. Pulses more unlike than the two described can hardly be imagined, and yet it has been taught that they are both the product of the same simple lesion—narrowing of the aortic orifice. Let me contrast their characters as illustrated by sphygmograms:—

Anacrotic.	*Bisferiens.*
Upstroke sloping.	Upstroke perpendicular.
Percussion wave barely indicated.	Percussion wave exaggerated.
Tidal wave rounded and sustained.	Tidal wave sharp and unsustained; begins near the respiratory line.

When aortic stenosis exists, of necessity there is more or less deformity of the valves, and hence it may be anticipated that these will leak to some extent in the great majority of cases. The influence of this complicating condition upon the pulse must not be forgotten. I will leave further consideration of the features of the pulses until I have placed before the reader a simple record of clinical and pathological facts, in the light of which I shall proceed. The cases recorded have occurred in my hospital practice during the last three years.

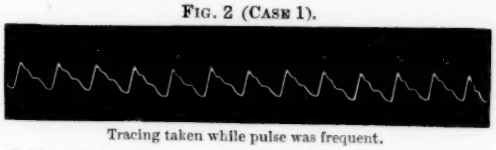
CASE 1.—A woman twenty-eight years of age was admitted to hospital with a history of having suffered from acute rheumatism at the age of seven years, and subsequent attacks. Dyspnœa was noticed six years before she was admitted to hospital. On admission there were dyspnœa, enlargement of the liver, and palpitation, but no dropsy. The physical signs were as follows: size of heart, $\frac{\text{III}}{2-5}$;[1] pulsation was visible to the right of the sternum in the region

FIG. 1 (CASE 1).



Tracing taken while pulse was slow. Anacrotic.

FIG. 2 (CASE 1).



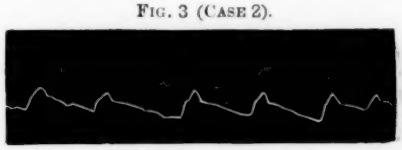
Tracing taken while pulse was frequent.

of the right auricle; epigastric and apex impulses were present. Auscultation:—Mitral area: a "thumping" first sound with a slight systolic murmur was heard; the second sound was inaudible. Tricuspid area: the first sound less "thumping," with a diastolic murmur. Aortic area: the first sound still "thumping" in character, with a systolic murmur; the second sound followed by a diastolic murmur. Pulmonary area: the first sound, systolic murmur; second sound, diastolic murmur. The pulse was most commonly rapid, 120 per minute, and then the aortic systolic murmur was not noticeably harsh. When the pulse became slowed under the influence of digitalis the harshness of the systolic murmur in the aortic area was very noticeable. The patient left the hospital improved in health, but returned three months later, having had a hemiplegic seizure three days before. She was now suffering from partial left-sided hemiplegia (face, arm, and leg). A month later a fresh attack of hemiplegia on the same side occurred, followed by coma, elevation of temperature (104·2° F.), and death in six days.

Necropsy.—The pericardium was adherent and the heart enlarged, the right auricle being specially so. The aortic valves were of almost cartilaginous hardness and were contracted, so that the orifice presented a mere triradiate slit. On the application of the water test slow regurgitation was elicited. There were vegetations along the edges of the valves. The aorta was healthy; the mitral and tricuspid orifices were stenosed; the pulmonary orifice was healthy.

CASE 2.—A woman forty-three years of age was admitted to hospital with a history of acute rheumatism at the age of seventeen years and many subsequent attacks. The joints of the hands were deformed and the muscles atrophied. Dyspnœa was noticed eight years before her admission to hospital. Dropsy of the lower extremities at night was noticed four or five years before admission. She had had an attack of hemiplegia ten years previously, shortly after confinement, from which she had quite recovered. On admission she was suffering from acute rheumatism of the small joints of the hands accompanied by local œdema. The liver was enlarged. Albuminuria was present. There was no dropsy of the lower extremities. The physical signs were as follows: size of heart, $\frac{\text{III}}{1\frac{1}{2}-5\frac{1}{2}}$; apex beat perceptible but ill defined, epigastric impulse. Auscultation:—Mitral area:

FIG. 3 (CASE 2).



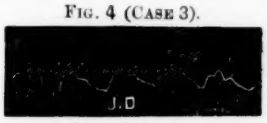
Pulse slow. Tracing anacrotic.

systolic and diastolic murmurs; systolic murmur not conducted to back, where the first sound was audible. Tricuspid area: systolic and diastolic murmurs. Aortic area: systolic murmur very loud and well conducted upwards over the manubrium sterni; the second sound, feeble diastolic murmur. Pulmonary area: systolic and diastolic murmurs; second sound audible and occasionally double, diastolic murmur, soft and blowing. The pulse was generally slow, about 50 per minute. The patient died a month after admission; bronchitis, with subfebrile condition, and finally œdema of the lungs preceded the fatal event.

Necropsy.—The pericardium was adherent and the heart enlarged. The aortic orifice was stenosed and the water test showed incompetence. The edges of the semilunar valves were much thickened, greatly narrowing the orifice, and failed to come into accurate contact. The mitral and the tricuspid orifices were stenosed; the pulmonary orifice was healthy.

CASE 3.—A man forty-six years of age was admitted to hospital with a history of attacks of acute rheumatism at the ages of seven, fourteen, twenty-one, and twenty-eight years. Dyspnœa was noticed five months previously; dropsy followed shortly afterwards. The symptoms on admission

FIG. 4 (CASE 3).



Anacrotic tracing.

were dyspnœa, dropsy, and enlarged liver. The physical signs were as follows: size of heart, $\frac{\text{III}}{1\frac{1}{2}-5\frac{1}{2}}$. A systolic murmur was audible in every area, also at the angle of the

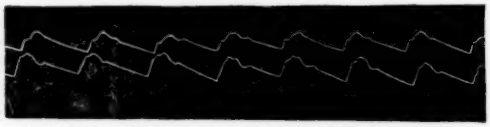
[1] The Roman figures indicate the left costal cartilage to which the cardiac dulness extends upwards, and the Arabic the maximum extent of the cardiac dulness to the right and left of the middle line (right auricle and left ventricle).

scapula behind. It was very loud and harsh over the aortic area, where there was a feeble thrill felt. The second sound was inaudible in the aortic area, but there was no diastolic murmur. The pulse-rate was usually about 80 per minute.

Necropsy.—There was a slight increase of pericardial fluid. The heart was greatly enlarged. The tricuspid orifice admitted three fingers. The pulmonary orifice was normal. The mitral orifice admitted two fingers. The segments were not markedly sclerosed. The left ventricle was greatly hypertrophied. The aortic valves were converted into hard, rigid, calcareous segments, in the centre being the stenosed orifice.

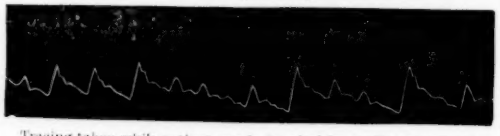
CASE 4.—A woman forty-nine years of age, with a history of acute rheumatism at the age of fifteen years and several subsequent attacks, had been twice admitted to hospital, with a year's interval between the admissions. On the first occasion the patient was suffering from renal calculus and was much debilitated; on the second occasion she was suffering from dyspnœa, dropsy, enlarged liver, and albuminuria. The physical signs were as follows: size of heart, $\frac{III}{1\frac{1}{2}-5}$; venous pulse in the neck, an epigastric impulse, and a diffuse apex beat. Auscultation:—Aortic area: systolic murmur and second sound. Pulmonary area: systolic murmur, second sound, and diastolic murmur. Mitral area: systolic murmur and second sound; systolic murmur inaudible at the back. Tricuspid area: systolic murmur,

FIG. 5 (CASE 4).



Tracing taken while patient was in hospital for renal symptoms.

FIG. 6 (CASE 4).



Tracing taken while patient was in hospital for cardiac symptoms a year later.

second sound, and diastolic murmur. (One day it was noted that between the sternum and left nipple the systolic murmur was loud and was followed by a double second sound, while the diastolic murmur was indistinct.) A short time before death pericarditic friction sound became audible, and there was a return of joint-pains. During the patient's first stay in hospital her pulse-rate ranged from 64 to 84; during the second it was generally over 100 and at times very rapid, 140.

Necropsy.—The pericardium was generally adherent. At the upper and posterior part the inflammatory lymph was evidently of very recent date. The heart weighed twelve and a half ounces. The tricuspid orifice admitted two fingers. The valve segments were thickened. The pulmonary orifice was healthy. The mitral orifice was extremely stenosed and admitted only the tip of the middle finger. The valve segments were sclerosed, with a considerable amount of calcification. The chordæ tendineæ were thickened and shortened. The valve segments of the aortic orifice were very considerably thickened by chronic endocarditis. No distinct stenosis was detected. Apparently there was but little obstruction and but little regurgitation. The valve segments were the seats of a recent vegetative endocarditis. The kidneys had the general appearance of extensive fibrosis. The left kidney presented several distinct cysts, containing urine-like fluid, and also some granules of the nature of gravel.

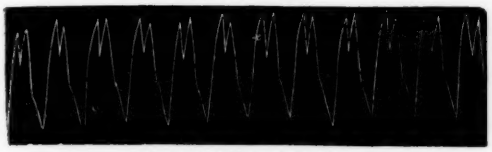
Analysing the features presented by the three anacrotic cases of which the diagnosis of aortic obstruction was proved post mortem to be correct, it will be noted that in the first case the pulse was habitually rapid—120 and more—and that it only became slowed under the influence of digitalis. In relation with the pulse-rate, again, the systolic murmur only acquired noticeable harshness when the pulse was slow. In this case these two features often regarded as more or less characteristic of aortic stenosis—slow pulse and harshness of the murmur—were habitually absent and only exceptionally present. Moreover, they were present only under artificial conditions—the influence of digitalis. In Case 2 only was the pulse habitually slow and in it the murmur was habitually decidedly harsh. In Case 3 the pulse was somewhat accelerated and the murmur was noticeably harsh and accompanied by a feeble thrill. In Cases 1 and 2 the mitral and tricuspid orifices were stenosed as well as the aortic, in both the pericardium was adherent, and in both the aortic valves leaked. In Case 3 the aortic orifice alone was stenosed, the pericardium was not adherent, and there was no aortic leakage as far as could be ascertained. All three cases were of rheumatic origin, and the primary rheumatic attack was of old date in all. The diagnosis of aortic stenosis which was made in these three cases was based essentially on the condition of the pulse, the auscultatory signs supporting it.

From the three cases in question one may be inclined to attribute pathognomonic diagnostic value to the anacrotic pulse in combination with confirmatory signs derived from the examination of the heart itself. Case 4 disposes of any such inclination. When the patient was admitted for the urinary trouble her pulse was typically anacrotic and essentially of the same character as that of the three cases already related. On her second admission, however, the pulse was found to have undergone a change; it was then the characteristic pulse (if any pulse is entitled to be so called) of mitral stenosis. In this case, although the aortic valves were considerably thickened, it could not be contended that there was any obstruction worthy of the name. The change in the characters of the pulse which had taken place between the first and second admission was remarkable and of course greatly diminished the diagnostic significance to be attached to the anacrotic pulse formerly observed. All who have taken tracings at different times from the same patient will, however, be prepared to encounter changes in the pulse, some of which are easily explicable, as, for instance, those due to the presence of fever, and others of which the causes are obscure. On the other hand, it has to be noted that in Case 3 the pulse remained "anacrotic" to the end, and resisted altogether the influence of nitrites, which failed to essentially modify its characters. The changes which occurred in Case 1 from time to time have already been noted. To sum up the evidence of the cases narrated. Three of the four cases bore out the belief that the anacrotic pulse is a valuable sign of aortic stenosis, provided the cardiac physical signs correspond. The fourth case taught, however, that pathognomonic diagnostic value must not be attributed to this pulse, inasmuch as other conditions besides aortic stenosis can produce it. In three of four cases the anacrotic pulse formed the basis of a diagnosis which proved correct; in the fourth the same pulse misled. It may be said that the profound alteration which had occurred in the pulse on the second admission of the patient in Case 4 should have diminished or annulled the diagnostic importance attached to the pulse on the first admission; but the change was hardly greater than that which, not once but repeatedly, was observed to occur in the pulse of Case 1. On the other hand, "unalterableness" of the pulse was a striking feature of the most typical case of all (Case 3) inasmuch as it was the least complicated. Such "unalterableness" of the anacrotic pulse is probably of great diagnostic value, although it may be rare.

CASE 5.—A woman twenty-five years of age was admitted to hospital with a history of "growing pains" in the knees, shoulders, &c., at the age of fourteen years, and of scarlet fever followed by dropsy at the age of eleven years. The patient had suffered from dyspnœa for four months and from cough and expectoration for two months before admission to hospital. Small quantities of blood were expectorated from time to time during the six weeks preceding her seeking advice. There was some loss of flesh. Dyspnœa was felt on exertion, and she had a cough with blood-tinged sputa. The physical signs were as follows: size of heart, $\frac{III}{1\frac{1}{2}-5}$. Auscultation:—Mitral area: first sound, systolic murmur, diastolic murmur. The first sound was audible at the back. Tricuspid area: systolic and diastolic murmur. Aortic area: loud murmurs, systolic and diastolic. Pulmonary area: systolic and diastolic murmurs; the second sound was audible. Over the manubrium sterni the systolic murmur was very harsh. Pulsation was very distinct at the episternal notch; it was also slightly visible to the right of the sternum in the second

intercostal space. A systolic thrill was felt over the manubrium sterni and in the second right intercostal space. At the apex a diastolic thrill was perceptible. The patient went to a convalescent hospital, where after a time she became

FIG. 7 (CASE 5).



Tracing taken from left radial.

FIG. 8 (CASE 5).

Tracing taken from right radial. (Both taken at the same sitting and with the same pressure.)

much worse. She returned to the infirmary with dropsy and an engorged liver, as well as great dyspnœa, and died a few days after admission.

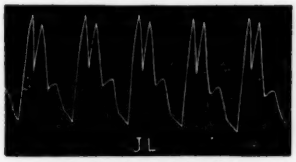
Necropsy.—There was a slight increase of fluid in the pericardium. The heart was very greatly enlarged and weighed twenty ounces. The right auricle was dilated. The tricuspid orifice admitted four fingers. The valve segments were not indurated. The right ventricle was dilated and much hypertrophied. The pulmonary orifice and valves were normal. The left auricle was dilated and hypertrophied. The mitral orifice was distinctly stenosed, the valve segments indurated, and the edges roughened. The left ventricle was greatly dilated and also somewhat hypertrophied. Extensive disease of the aortic valves was present; the orifice readily allowed the introduction of the first finger either from the aortic or ventricular side. A graduated cone could be inserted up to the level corresponding to 1¾ in.[2] in circumference. The aortic cusps were much thickened, their irregular induration having led to considerable puckering, so that the valves were much misshapen. When viewed from the aorta they appeared like a rounded, raised fibrous ring, surrounded by a trench-like depression. While, however, the valves were much thickened and indurated they appeared to be most so along the borders, the portions of the valves nearer the base or line of attachment being less involved, allowing the diseased cusps to be thrust backwards towards the sinuses of Valsalva by a force applied from the ventricular aspect. It thus appeared that there would not be a very extreme degree of obstruction to the blood passing from the ventricle into the aorta. The intermediate cusp—that behind which there is no coronary artery—was most extensively involved, and the right portion of the free edge of the cusp was, as it were, ulcerated to such an extent as to allow of its projection as a free tag or polypus-like appendage. The anterior and left posterior cusps were small and partially fused. The orifices of the coronary arteries were normal. No atheroma of the aorta was present. The orifices of the innominate and the left carotid and subclavian arteries were normal. The lungs were much congested and œdematous. There was a small infarct at the base of the right lung.

CASE 6.—A man twenty-seven years of age was admitted to hospital with a history of rheumatic fever at the age of twenty years and a second attack a year later. Dyspnœa was not marked till two years before admission to hospital, when dropsy was noticed. He left the hospital improved, but returned eighteen months later suffering from albuminuria, hæmaturia, and general anasarca. On admission dyspnœa and palpitation were the chief symptoms. On readmission the chief symptoms were dyspnœa, dropsy, enlarged congested liver, and albuminuria. The physical signs were: size of heart, $\frac{\text{III}}{1\frac{1}{2}-5\frac{1}{2}}$. Auscultation:—Aortic area: systolic and diastolic murmurs.

[2] Normal for female 3·019 in. (Peacock).

Pulmonary area: systolic and diastolic murmurs; the second sound was audible. Tricuspid area: systolic and diastolic murmurs heard. Mitral area: systolic and diastolic murmurs present, the former audible behind at the angle of the

FIG. 9 (CASE 6).

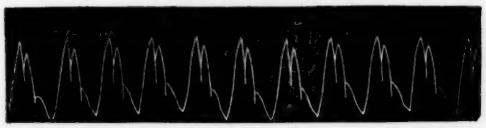


Tracing from right radial.

FIG. 10 (CASE 6).

Tracing from left radial. (Both taken at same sitting.)

FIG. 11 (CASE 6).



Tracing taken a few weeks before patient's death from Bright's disease. Right radial.

scapula. There was no albumen in the urine on admission. On readmission there were albumen, blood, and casts in the urine.

Necropsy.—There was recent pericarditis (the patient's chest had not been examined during the last week of life). The heart was enormously enlarged and weighed 1 lb. 11½ oz. The aortic valves were thickened, indurated, and puckered by their contraction, evidently allowing much regurgitation. The sclerosis was considerable, but there were no distinct vegetations. There was no decided stenosis of the aortic orifice, although in comparison with the enormous ventricle the orifice was small. At the level of the attachment of the valve segments the circumference of the aorta was 2½ in.;[3] the coronary arteries and the aorta were healthy. The kidneys were enlarged and weighed together 13¾ oz. The capsule was readily detached, leaving a smooth, mottled surface. On section the cortex was found to be increased, and both it and the medulla were congested and apparently the seat of nephritis, mainly parenchymatous. Pneumonic consolidation was noted at the base of the right lung; there was left pleuritic effusion.

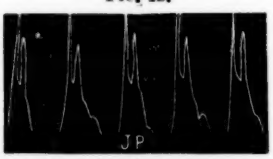
These are the only two cases in which I have observed the pulsus bisferiens clinically and had an opportunity of examining the aortic orifice pathologically. In both cases the incompetence of the aortic valves was much more pronounced than in the cases related as being associated with anacrotic pulse, but it is to be remembered that cases of aortic stenosis associated with pulsus bisferiens in which there was no incompetence of the valves have been recorded.[4] On the other hand, in one of the cases (Case 5) the stenosis was only moderate in degree, while in the other case (Case 6) it could hardly be said to exist at all. In very ordinary cases of aortic disease with incompetence of the valves, but without any stenosis of the orifice, a fairly close resemblance to the pulsus bisferiens is frequently observed, the tidal wave beginning low down and being unsustained and angular. (Fig. 12.) A very striking feature of the pulse in both my cases was the inequality of the development of the peculiar characters on the two sides. In Case 5 the pulsus bisferiens, indeed, might often correctly have been described as a unilateral phenomenon, for

[3] Normal for a man 3·146 inches (Peacock).

[4] Mahomed: Medical Times and Gazette, Aug. 19th, 1872.

it was only occasionally and in very imperfect fashion that the opposite pulse assumed similar characters. In Case 6 again, while the special characters of the pulse were distinct in both radial arteries, they were always more pronounced on one side. In Case 5 the special characters of the pulse were developed on the left side; in Case 6, while developed on both sides, they were much more pronounced on the right side. The arteries were carefully examined in both cases—clinically and pathologically—with the object of discovering some explanation for this unequal development of the special characters in the two radial arteries, but no explanation was forthcoming. The objection that the pulsus bisferiens does not exist in nature, but is a product of the sphygmograph, cannot for a moment be entertained, seeing that the double beat was easily perceptible by the mere application of the finger. The cases related seem to show that neither the anacrotic nor the bisferiens pulse possesses pathognomonic value as a sign of aortic stenosis. It does not follow that both these pulses are devoid of value in the diagnosis of this lesion. Far from this being the case, both seem to possess distinct value, but especially the anacrotic pulse. The explanation of the association of these pulses with the lesion is a different matter. It is difficult to admit that the relationship is one simply of cause and effect, for, if so, how does it happen that the same lesion should be capable of producing two pulses so unlike? Moreover, if the relationship be one of cause and effect, why should the lesion give peculiar characters in some cases to the pulse on one side only, or at least in much greater degree on one side? The existence or non-existence of incompetence of the aortic valves will not explain the production of the bisferiens pulse in one case and that of the anacrotic pulse in another case, because a certain amount of regurgitation is common with both pulses. We are unable to explain the mode of production of these pulses, and I do not think we are warranted in affirming that either of them is the direct result of the aortic stenosis. But these pulses are found so often in association with aortic stenosis that we cannot deny them diagnostic value while awaiting the full explanation of the mode of their production. Of the two, the anacrotic pulse probably possesses the greater diagnostic value.

FIG. 12.



Tracing taken from case of aortic incompetence without constriction of orifice, to show a common type of curve simulating to some extent the bisferiens tracing.

Mosley-street, Manchester.

THE PHENOMENA CONCERNED IN THE PRODUCTION OF ABDOMINAL DROPSY.

BY JAMES OLIVER, M.D. EDIN.,

PHYSICIAN TO THE HOSPITAL FOR WOMEN, SOHO-SQUARE, AND SENIOR PHYSICIAN TO THE FARRINGDON GENERAL DISPENSARY.

THE capillary system is the seat of the phenomena of nutrition, absorption, and secretion, and it is to this system one must look for an explanation of the occurrence of abdominal dropsy. Our knowledge, however, of the anatomy of the capillary vessels is unfortunately still imperfect. From the arteries the blood flows directly into the veins, and it is admitted that between these two sets of vessels there is no distinct demarcation. Regarding the lymphatics, it is doubtful what is the exact relationship of these vessels to the blood stream. Some authorities affirm that through the medium of the serous spaces of the body the liquor sanguinis flows directly from the minute arteries into the lymphatics, whilst others deny this continuity and assert that, although the venous and lymphatic vessels are intimately related to each other through the nervous system, there is nevertheless no structural continuity, and that any interchange which goes on is accounted for merely by contiguity. According to Recklinghausen, the peritoneum, which is an enormous serous space, presents on its internal surface the open mouths of lymphatic capillaries; but it is highly improbable that the minute bloodvessels open directly into this cavity and that the fluid which finds its way thither flows from the orifices of these vessels. After careful study one is rather induced to believe that the fluid which lubricates the serous surfaces passes from the bloodvessels by a process of filtration. This physiological fluid, which presents the characters of lymph, coagulates spontaneously, and in this respect it differs somewhat from that which accumulates and produces abdominal dropsy; but it is probable that the difference in behaviour is merely due to the presence of a larger quantity of water in the pathological than in the physiological transudation. Diluted blood, it may be remarked, behaves in a similar manner, for that drawn from the vein of an animal into which a very large quantity of water has been introduced does not coagulate.

The fluid which filters normally from the bloodvessels into the peritoneum varies in amount according to circumstances. It is greatest after the ingestion of a good meal, and is reduced to a minimum during starvation. At no time, however, is it excessive, nor does it show any disposition to accumulate, as the process of absorption keeps pace with that of exudation, and in this manner a state bordering as closely as possible upon equilibrium is maintained. The blood is the source of this, as it is of all the other liquids of the body, but almost as rapidly as it filters from the bloodvessels it finds its way again into the general circulation.

In dealing with the phenomena concerned in the production of abdominal dropsy there must be taken into consideration: (1) the nature of the blood; (2) the physico-chemical state of the membrane or membranes participating in the process of osmose; and (3) the motion of the blood.

1. *The nature of the circulating fluid.*—The blood is an aqueous solution of organic and saline matters, and although it fulfils its functions largely through the agency of the water which it contains it must be observed that it does not circulate merely as an aqueous fluid. From time to time the quantity of water in the blood may, and does, vary to a marked extent without the physiological phenomena being thereby necessarily disturbed. If, however, a large quantity of water is suddenly either abstracted from or added to the blood, then changes of a very decided character may be induced, but the resulting disturbance will depend materially upon the power which the organism possesses of adapting itself to circumstances. When a certain amount of water is injected into the aorta those tissues which are least supported are more or less rapidly infiltrated by dilute liquor sanguinis, but it is noteworthy that this result is not so readily or so markedly produced when the same quantity of water is injected into a vein. This disclosure is accounted for by the fact that the dilute blood in the latter case undergoes considerable change before it reaches the systemic capillaries, where the process of filtration is effected. In cholera the water contained in the blood may be rapidly reduced, and the tissues may consequently become more or less desiccated; but it seldom, if ever, happens that the watery material of the blood is so inordinately increased that dropsy develops from this cause alone. During the progress of some wasting diseases and in association with a watery condition of the blood dropsy may occur, but it is evident that this phenomenon cannot be solely attributed to hydræmia, as the nutrition of the body generally is disturbed and other conditions which favour the occurrence of œdema are at the same time present. The mechanical conditions under which the efficiency of the circulation is maintained depend upon the presence in the blood of the two organic compounds, albumen and fibrin. The albumen hinders the watery material of the blood from filtering through the vessels, whilst the fibrin suspends the corpuscles, and, facilitating thus the transit of these bodies, lessens the possibility of the circulation being impeded or arrested by them. When a solution of the white of egg is poured upon an organic diaphragm the passage of the aqueous fluid through this membrane is retarded in consequence of the albumen present. The behaviour of the blood in so far as the process of filtration is concerned is to some extent, it would appear, dependent upon the amount of albumen which is held in solution. In many cases of Bright's disease dropsy is more or less rapidly induced, and this occurrence is attributable to an alteration in the physical state of the blood, but especially to the loss of albumen, as the transudation from the bloodvessels is thereby correlatively

increased. If in kidney disease there is not only a diminution of the albumen, but an increase of the water in the blood, then it is evident that, coöperating, these two conditions will greatly facilitate the production of dropsy. In health the composition of the blood is well maintained; when, however, that relationship which should exist between the water and the solids is unduly disturbed, then the chemico-vital conditions under which the processes of life are carried on become disordered and dropsy may ensue. The red blood corpuscles display a great affinity for water, and in some cases of anæmia it is quite possible that the dropsy which occurs may be due to an alteration in the chemical state of these bodies, whereby the metabolic processes generally are deranged.

2. *The physico-chemical state of the membrane or membranes concerned in the phenomena of transudation and absorption.*—The composition of the blood may be practically normal, but an excessive transudation may nevertheless take place in consequence of some variation in the state of the organic filter. If in a healthy animal the principal vein of a limb is ligatured it does not follow that by thus interfering with the return of blood œdema of this extremity will be produced. If, however, the vaso-motor nerves are cut, the interstitial meshes of the area so disturbed are forthwith more or less markedly infiltrated by a serous exudation. In this case the tone of the vessels is destroyed, and thereby they are rendered more permeable in so far as the process of exosmose is concerned, but less permeable as regards the in-going current. Under ordinary circumstances the fluid which exudes from the bloodvessels passes with almost equal rapidity into the blood stream again. Should, however, this harmonious relationship be disturbed, whether from increased transudation or defective absorption, dropsy may be produced. At one time it was supposed that the process of absorption was effected by the lymphatics alone, but it is now generally believed that the bloodvessels too are directly concerned in this phenomenon. To facilitate the process of absorption the fluid which is to be taken up should be placed in as immediate contact as possible with the interested vessels. On account of its thickness the skin absorbs feebly, but its activity may be greatly increased by removing the cuticle. Occasionally it happens that the peritoneum, which under ordinary circumstances is a delicate structure, becomes converted into a thick and skin-like membrane, and the process of absorption may in consequence of this change be hindered or abolished. In those cases in which the peritoneum is enormously thickened the lymphatic openings described by Recklinghausen may be constricted or occluded, and the utility of these structures in so far as the removal of the transudation is concerned may be more or less destroyed. I doubt, however, whether dropsy, general or local, can ever be solely attributed to defective absorption.

3. *The motion of the blood.*—The perpetual movement of the blood hinders transudation and favours absorption. The structure of the bloodvessels is such that the transudation of fluid from these tubes is rendered easy, but this process is undoubtedly moderated by the perpetual motion of the blood. It is evident, too, that the process of absorption must be facilitated by this same phenomenon. If the capillary circulation is impeded, then the blood remains longer in contact with the same portion of the vessel, and thereby the transudation is increased and the rate of absorption is correlatively diminished. Through the agency of the nervous system it is remarked that whatever accelerates the circulation increases the rate of absorption, but that whatever slackens it lessens the activity of this process. It is alleged that dropsy may be due to an altered relation between venous and arterial pressure. The dropsy which is observed in association with cirrhosis of the liver is said to be produced in this manner. If the arterial pressure is increased, then the circulation is accelerated and the transudation is thereby reduced; whereas, if the venous blood is impeded or arrested, then the stasis alone, apart from an alteration in the pressure relationship, would account not only for defective absorption but for increased exudation.

Gordon-square, W.C.

PUBLIC ABATTOIRS FOR LONDON.—The Church Society for the Promotion of Kindness to Animals has received from the London County Council an intimation of their readiness to receive a deputation on Thursday next, the 29th inst., at 3 P.M., for the presentation of a memorial praying for the institution of public abattoirs in place of the existing private slaughter-houses.

LYMPHANGIOMA CUTIS.

BY JAMES GALLOWAY, M.D. ABERD.,
ASSISTANT PHYSICIAN AND PATHOLOGIST TO THE GREAT NORTHERN CENTRAL HOSPITAL.

THE following account of a somewhat uncommon form of skin lesion may be of interest on account of the special opportunity obtained for the study of its anatomical characters by the method of treatment adopted.

A girl aged ten years of age presented herself at the out-patient department of the Great Northern Central Hospital on Aug. 16th, 1893.

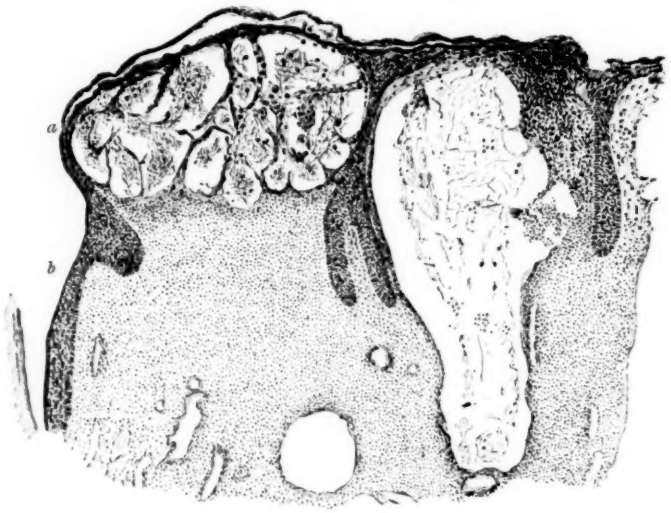
Description of the lesion.—The patient suffered from a vesicular eruption situated in the skin over the upper portion of the left scapula. The true appearances of the lesion were masked by much dermatitis—the result of poultices and the friction of her garments. Under appropriate treatment the dermatitis rapidly disappeared. The characteristics of the lesion then became clear. The area of skin involved corresponded to the central and upper part of the left scapula, extending from the vertebral border of the scapula on one side to the margin of the axilla on the other. The lesion consisted of numerous vesicles, varying from the minutest visible up to the size of a small pea, and tending to be arranged in small groups. These vesicles were obviously somewhat deeply situated, the epidermis covering them being somewhat resistant to injury. They contained fluid and were translucent; most of them were colourless, but a few were of a pale-straw tint. The largest vesicles were most numerous towards the central portions of the growth. No dilatation of the skin bloodvessels was anywhere apparent, except towards the most prominent parts of the largest vesicles. In this position in some cases were observed a few minute, straggling, and dilated venous capillaries. Situated in the healthy skin at varying distances from the margin of the main lesion were several "satellite" areas, which were affected in a similar manner. These vesicles were also arranged in groups and were of small size.

History of the patient.—The history of her family has little obvious bearing on the condition described. The mother died from carcinoma of the gall-bladder and liver in the hospital, but in no other of the relatives was any information afforded of deformity or of tendency to the formation of new growths. The patient herself is said to have shown no trace of the lesion at birth. When three months old, however, she had a fall, striking the left shoulder on a fender; an abscess formed on the site of the injury; this had to be opened, and continued to discharge for some time. The lesion described was first observed in the same position as this injury, and had continued to increase in size. The patient continued under observation till Oct. 25th, when she was lost sight of for a time. She returned to the hospital on April 25th, 1894, and it was then ascertained that she had suffered in the interval from enteric fever. The skin lesion was now very much inflamed. On treatment the dermatitis subsided, and it was found that the lesion had increased in area, especially towards the axilla. This increase was readily verified on comparison with photographs taken before the attack of enteric fever. The patient was in perfect health, except for the lesion of the skin. On account of the increase of the lesion, especially towards the axilla, where attacks of dermatitis would necessarily occur, it became compulsory, at least, to check the advance of the lesion.

Treatment.—In consultation with my colleague, Mr. Peyton Beale, it was decided to remove the affected area rather than to use less radical measures. On May 22nd Mr. Beale removed the portion of the skin involved with some healthy skin all round—an area not less than fifteen square inches. Portions of the deep fascia and of the underlying muscle were also removed where the growth was adherent to the deeper structures. The edges of the large wound thus made were brought into apposition by the introduction of six thick silver wire sutures, some of them fully three inches from the margin of the wound. Considerable force had to be exerted to close the wound, but the edges came well together; a few interrupted silk sutures were then placed in position and the wound dressed. The arm was fixed in a position to relax the tension on the stitches by means of a poro-plastic splint. The wound healed by primary union throughout, the stitches being removed on the eighteenth day. The wire tension sutures had dragged through the skin, but had produced their

effect. Mr. Beale remarked that flat silver wire not less than one-eighth of an inch in width was best adapted for these sutures. In the first instance it had been intended to use Thiersch's method of skin grafting to cover the wound, but the union was so rapid and complete that grafting proved to be quite unnecessary.

Examination of the lesion. — On cutting through the diseased tissue there were found very few large bloodvessels, apparently fewer than in a piece of normal skin of the same area. The skin and subcutaneous tissue at the thickest portion of the growth measured from three-quarters of an inch to an inch in depth. The vesicular structure so obvious on the surface of the tumour was found to extend through the subcutaneous tissue between the lobules of fat. The margins of the growth, where the vesicles were very minute and apparently commencing, showed no increase in number or size of bloodvessels. The subcutaneous tissue, where unaltered, seemed denser than normal. Different portions of the growth were taken for microscopic examination, fixed in corrosive sublimate, hardened in alcohol, and embedded in paraffin. The structure of the lesion may be more readily understood on reference to the accompanying sketch. The lesion consists of vesicles arranged in groups covered by a layer of horny epithelium. The vesicles seem to have originated in the subepithelial tissue, and by their increase in size to have stretched the overlying tissues, and in this way, as well as by lateral pressure, to have obliterated the interpapillary processes of epithelium. The trabeculæ between the vesicles remain distinctly fibrous in structure. Occasional long inter-papillary processes of epithelium are observed, situated as a rule between the groups of vesicles and produced apparently by the enlargement of the vesicular groups. The vesicles themselves contain a network of fibrin, in some loosely arranged, in others more dense, and a few leucocytes; in none of the sections examined, either from the edge or from the central portions of the growth, were observed blood cells or blood pigment. The fibrous character of the subcutaneous tissue was considerably changed throughout much of the growth by the presence of large numbers of small round cells, partly, no doubt, the result of the repeated attacks of dermatitis which had occurred, and partly due to the intrinsic character of the growth.[1] Throughout this tissue were observed numerous spaces of irregular shape, apparently lymphatic vessels and spaces. The close resemblance between this case and those described by Messrs. Hutchinson and Morris[2] leaves little doubt that they are of the same character. As these cases, with others, have given rise to the doubtful attitude assumed by certain observers, who appear to consider that growths of this character are brought about by the degeneration of blood vascular nævi, the results of this examination are worth noticing.[3] 1. The growth was under observation during a period of development, and no appearance of dilatation of bloodvessels was observed at the growing margins. 2. The naked-eye appearance while the growth was *in situ* did not show any dilatation of bloodvessels, with the exception of the superficial stellate vessels on the summit of the larger vesicles, and these were secondary to the formation of the vesicles. On section and on microscopic examination no dilated bloodvessels were observed. It is obviously somewhat difficult to pronounce what is the origin of vesicular spaces such as those described after their formation is complete; but the comparison of these with the cavernous angeioma of the liver, for example, renders it exceedingly improbable that they could have originated from dilated bloodvessels without traces of blood cells or pigment being left, and makes it much more probable that lesions such as the one described should originate from the dilatation of lymphatic vessels of the skin.



This figure has been drawn under a magnification of 100 and reduced. Section through the affected area of skin, showing a group of clustered vesicles. *a*, Cluster of vesicles. *b*, Underlying tissue, consisting of small round cells.

Queen Anne-street, W.

[1] Cf. Hamilton: Text-book of Pathology, vol. i., p. 396: "In the macroglossia or lymphangioma of the tongue the author has found lymphadenoid deposits lying between the distended lymph vessels in great abundance."

[2] International Atlas of Rare Skin Diseases, vol. i. 1889.

[3] Cf. the remarks of Besnier and Doyon, in their French translation of Kaposi, vol. ii.; the excellent article by Mr. Alfred G. Francis should be noted by those interested (British Journal of Dermatology, February and March, 1893).

NOTES ON RHEUMATISM IN SCARLET FEVER.

WITH AN ANALYSIS OF ONE HUNDRED AND SEVENTEEN CASES.

BY AUBREY D. P. HODGES, M.D. LOND. &c.,
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(Concluded from p. 1156.)

WITH regard to septicæmia, most of the "septic" cases did not get joint trouble, and though a slight enlargement of the spleen is said to be common in the early days of severe scarlet fever (Thomas), and a definite enlargement may often be detected in the septic cases, no special association was found of splenic enlargement with the arthritic cases. Nor was there any definite association

with ulceration of the throat, which was often absent when the arthritis commenced or did not occur at all. There were two cases of joint mischief following rheumatism. In one a knee became contracted and afterwards developed the "white swelling" of strumous disease. In the other there were contraction and stiffness of an elbow, which passed off in a few weeks under suitable treatment. The only other joint trouble was a case of strumous dactylitis, not associated with rheumatism. The duration of arthritis was usually less than a week, and the average 4·31 days. This may be compared with the statement of Dr. M. Bruce[1] that rheumatism is generally subacute and rarely lasts more than a week in children.

Relapse, or return of pain, was noticed in 16 cases, 13·67 per cent. It occurred in 17 per cent. of the cases over ten, or thirteen times, and in 7 per cent. of the cases under ten, or three times, at the ages of nine, nine, and six respectively. In four instances there were more than one, in one four relapses. Half of them were attended with pyrexia, and half were not; and their average duration was 3·26 days. It might, perhaps, be thought that relapse would be less frequent in these cases, because the patient is generally kept in bed for some time, under careful medical supervision, for other reasons, however mild the rheumatic attack.

I will next consider the occurrence of *heart affection*, first in connexion with the rheumatic, and afterwards with the non-rheumatic, cases in scarlet fever. There were twenty-three instances, 19·65 per cent., in which either a systolic cardiac bruit, most clearly audible at the apex, conducted outwards, and persistent under observation for some weeks, was recorded in association with the arthritic attack, or in which the lesion was described as "mitral regurgitation." In the latter, five in number, the duration of the bruit under observation is not certain; but in one of them the note of mitral disease occurs forty-eight days after the onset of rheumatism (No. 18). In three cases, numbered 5, 6, and 8, pericarditis also was diagnosed, and in a few more its existence was suspected. The chief particulars of all 23 cases are here given in tabular form:—

TABLE II.—*Occurrence of Heart Affection in Rheumatic and Non-rheumatic Cases of Scarlet Fever in Young Patients.*

Number of cases.	Age.	Type of scarlet fever.	Day of onset of rheumatism.	Duration of pain in days.	Persistence of bruit in days under observation.
1	14	Mild.	30th.	2	62
2	6	Ordinary.	8th.	1	22
3	6	Mild.	10th.	8	20
4	9	,,	6th.	5	5
5	13	Ordinary.	7th.	6	47
6	29	,,	30th.	3	29
7	8	Severe.	7th.	6	71
8	3	,,	8th.	3	7
9	9	Ordinary.	10th.	5	63
10	5	Mild.	5th.	1	15
11	7	,,	30th.	4	?
12	12	Severe.	7th.	2	43
13	13	,,	4th.	6	58
14	4	,,	4th.	8	?
15	18	Ordinary.	3rd.	3	55
16	3	Severe.	14th.	9	?
17	11	,,	9th.	6	25
18	16	,,	10th.	8	?
19	5	,,	9th.	8	?
20	4	Ordinary.	6th.	5	42
21	12	,,	3rd.	6	56
22	22	,,	5th.	6	54
23	2	Severe.	12th.	5	42

In Cases 4, 6, 15, and 22 there was a relapse; in Cases 5, 13, and 21 evidence of aortic mischief; in Cases 5, 6, and 8 pericarditis; in Case 20 chorea; in Cases 8, 17, and 18 nephritis; and Cases 4, 8, and 17 ended fatally.

It will be seen that in 11, or nearly one-half, the bruit persisted at the end of six weeks, and in 7, nearly one-third, at the end of two months; that 3 subsequently developed signs of aortic disease, and that in 2 of 3 that died vegetations were found on the mitral valve. Some amount of cardiac disturbance (dilatation, with irregular action, reduplicated second sound, transient bruit, or suspected pericarditis) was noted in 7 other cases. The heart's condition was doubtful, or not noted, in 24, and in several of these it seemed probable from the history of the case that there was inflammatory lesion. It was recorded as normal in 63, or 53·8 per cent., rather more than one-half. If the doubtful cases be excluded the percentage of heart lesion in the remainder is 24·7, and if all the cases be taken in which cardiac disturbance is noted the proportion is rather more than 32 per cent. The percentages of endocarditis recorded for acute rheumatism vary considerably, and the following may be quoted:—Fuller, Wunderlich, and Lebert, 23 per cent.; Peacock, 33 per cent.; Budd, 48 per cent.; Fagge, 55 per cent.; Church, 64 per cent. It is a generally recognised fact that in rheumatic fever the liability to heart inflammation is greater the younger the patient; and that the same rule holds in the rheumatism of scarlet fever the following table seems to show:—

TABLE III.—*Heart Affection in Rheumatic Fever and in the Rheumatism of Scarlet Fever in Young Subjects.*

Age.	Percentage of heart lesion.	No. of Cases.	Age.	Percentage of heart lesion.	No. of Cases
2 years ...	100	1	10 to 15 years...	20	6
3 ,, ...	50	2	15 ,, 20 ,, ...	14·28	2
4 ,, ...	40	2	20 ,, 25 ,, ...	10	1
5 to 10 ,, ...	25	8	25 ,, 30 ,, ...	6·6	1

These figures will be found to agree relatively, though by no means actually, with those of Dr. Church, as quoted by Fagge, under acute rheumatism; and I give the proportions per cent. in the various decades up to forty, in order to make the comparison more clear:—

TABLE IV.—*Comparison of the Present Series with those of Dr. Church.*

Age	0 to 10	10 to 20	20 to 30	30 to 40
Present series	30·95 %	18·6 %	8 %	0 %
Acute rheumatism (Dr. Church)... ...	83 %	69 %	51 %	30 %

The average duration of joint pain in the above twenty-three cases was just over five days, as against 4·3 for the whole series; thus there would seem to be a rather greater liability to heart trouble, *cæteris paribus*, when the arthritis is severe; while, on the other hand, it may complicate the mildest cases, for in two pain was noted only on one day, lasting perhaps less than twenty-four hours. In both these particulars there is agreement with what is known of acute rheumatism. In many cases, no doubt, the bruit disappears after a longer or shorter period; but in a certain number it persists with obviously serious heart lesion, and, even when it does not, it is not a necessary deduction that it was not due to inflammatory mischief, or even that the inflammation is cured. The bruit developed in acute rheumatism sometimes vanishes, that in chorea frequently, yet permanent organic lesion (stenosis) is found in cases giving a history of chorea years before, and there can be no doubt that in this disease the early bruit is in many cases of organic origin. Chorea followed the arthritic attack in one of these cases. It would seem likely from the present analysis, considering the relative frequency with which rheumatism and heart inflammation occur as complications of scarlet fever, and their close association, that the latter is most often a rheumatic phenomenon. In fact, in only a small minority of cases did endocarditis arise without either an attack or a history of rheumatism. And these, too, were chiefly in young children, in whom, apart from scarlet fever, it is known that rheumatic endocarditis may occur without any arthritis, a relapse following, in which the joints are affected; and in whom, moreover, it is believed that such lesion may arise without any relapse taking place. And obviously the same thing may happen in the rheumatism of scarlet fever, if the apparent kinship between the two forms be a real one.

There are seven cases of heart lesion recorded without any known attack of arthritis, and perhaps the easiest way to consider them will be to give a short abstract of each.

Case 1.—A female infant eighteen months old was admitted to hospital three weeks after the onset of scarlet fever. She had an attack of pyrexia soon after admission, with much restlessness and crying out at night. No joint swelling was noticed, but she developed endocarditis, and no other cause was found to account for the attack. The mother of the child was admitted on the same day in the acute stage of fever. She had an attack of rheumatism at the end of the first week, followed by relapse.

Case 2.—A girl three and a half years of age was admitted to hospital on the eighth day of fever. She had an attack of secondary pyrexia, for which no cause was found but endocarditis, which was severe, with prolonged convalescence and anæmia. There was a history of rheumatism in both father and mother.

[1] Quain's Dictionary of Medicine.

Case 3.—A girl six years of age was admitted to hospital on the fourteenth day from the onset of the fever, suffering from desquamation, endocarditis, pericarditis, œdema of the legs, and anæmia. It is not noted whether she had had joint pains or if there was rheumatic history. A bruit persisted during the fifty-seven days the child was under observation.

Case 4.—A boy seven years of age was admitted to hospital on the seventh day of the fever, suffering from severe ulcerated throat and moderate pyrexia. The temperature was normal by the twentieth day. On the twenty-third day the patient had a severe pyrexial attack with earache and delirium and secondary adenitis, during which a systolic bruit was noted, which persisted on the seventy-eighth day.

Case 5.—A girl eleven years of age was admitted to hospital on the sixth day of onset of illness suffering from a mild attack of scarlet fever. On the twenty-second day secondary pyrexia with right pleurisy developed, and on the twenty-seventh day a systolic harsh bruit was audible, the duration of which was not noted, and which from the description may have been pericardial.

Case 6.—A girl fourteen years of age was admitted to hospital suffering from mitral regurgitation, with a history of acute rheumatism; but there was no arthritis with the scarlet fever, which was of a mild form. She had subsequently suffered from nephritis.

Case 7.—A boy fifteen years of age had mitral regurgitation on admission; he felt no pain during the course of the scarlet fever beyond severe pains at the onset of the fever. There was no history of acute rheumatism, but a definite one of a previous attack of scarlet fever two years preceding, followed by prolonged desquamation, which was complicated with arthritis. There were signs of fresh endocarditis in the present attack.

In the first two of these cases the pyrexial attacks may have been rheumatic, and there was probably a rheumatic tendency in each. It is possible the third case may have had arthritis before admission, and it is also possible that in the fourth case a slight arthritis may have been overlooked during the attack with earache and delirium. In the fifth case it would probably have been noted, even if slight, had it occurred, and this is the only one in which rheumatism could be certainly excluded, for in the sixth and seventh cases the endocarditis was of previous date, while in the latter its source was probably scarlatinal arthritis. I might mention that these last two cases are the only ones I have been able to gather, among some hundreds in which I have lately been able to inquire, in which a patient who has had a previous attack of rheumatism has escaped arthritis with subsequent scarlet fever. However, there have been two relapses of scarlet fever in which arthritis did not appear, though it had been present in the initial attack. Among the staff who have had scarlet fever in the last three years two had had acute rheumatism, and each developed a severe attack of arthritis at the usual stage of the fever, in which the rheumatic phenomena were well marked, with endocarditis, pericarditis, and relapse. The existence of a personal or family history of rheumatism is difficult to ascertain at a fever hospital, where there is a limited access to friends and most of the patients are children. It was noted as present in twenty cases, or 17 per cent., and of these arthritis occurred in three of one family and in two of five others. There were two cases of chorea, one in which rheumatism had not occurred and one following it, of the notes of which latter, as being specially interesting, I will give a brief abstract.

Case 8.—A boy four years of age developed scarlet fever on Jan. 23rd. The temperature had not exceeded 103° F., but had fallen to 101·6° on Jan. 27th. On the following day his wrists were noticed to be swollen, and the temperature rose to 104·2°–102°, but he used his hands to feed himself, and would pull at a handkerchief without complaint when told to do so. The swelling lasted till Feb. 3rd, still without complaint of pain. On Jan. 30th an apical systolic bruit was heard over the heart. The temperature became normal on Feb. 7th. On the 11th the bruit was well marked, and slight choreic movements were seen. On the 17th the chorea was much increased and general, but affected the face and right arm chiefly. The movements had practically ceased on March 1st, but the bruit persisted, and was conducted to the axilla.

On the association of chorea with scarlet fever I may again quote Dr. Barlow,[2] who, speaking of its connexion with acute rheumatism, says: "I do not know any other acute fever of childhood of which it is a sequel, except occasionally scarlet fever, with which, significantly enough, rheumatism is apt to occur." There were seven cases of nephritis among the rheumatic cases, or 5·9 per cent., which is only a fraction higher than in the total number of scarlet fever. There does not seem, therefore, to be any special connexion between the two complications. It is not uncommon to find a trace of albumen at an early stage in the arthritic cases, but this, as mentioned by Thomas,[3] is apt to occur in severe cases of scarlet fever, and may signal the approach of some complication. Lung troubles were not more frequent than in the other cases. There were ten deaths, or 8·5 per cent., as against 6·4 per cent. for scarlet fever generally. The immediate cause of death was given in three as pneumonia, in two as diphtheria, in two as septicæmia, and in one each as nephritis, suppression of urine, and hæmorrhage from the neck. From this it would seem that rheumatism, as a complication, adds little in itself to the risk of a fatal issue. Only two necropsies were obtained, in one of which were found acute nephritis, œdema of the lungs, vegetations on the mitral valve, and pericarditis with a small effusion; in the other, evidence of broncho-pneumonia, renal congestion, deep ulceration of the palate, tonsils, and fauces, and small vegetations on the mitral valve were present. The treatment coincided with that adopted usually for acute rheumatism. The salicylates relieved the pain rapidly and almost invariably, the effect being specially striking if they had been withheld for a time at first. While many of the milder cases lasted only a few hours or days if left to themselves, others in which the pain was severe, or in which sleeplessness followed night after night, were relieved at once by the administration of these salts.

In conclusion, then, the ordinary arthritic attacks in scarlet fever and acute rheumatism, since they show such close agreements in their course, phenomena, complications, and reactions to similar treatment, are in all probability of the same nature; but their identity can only be proved by a wider study of their "life history," especially the after-history of young children. And in a disease whose manifestations extend over such a prolonged period of life, with intervals of years, perhaps, between them, it would seem that it is to the general practitioners that we must look to furnish the details of this history. "It is rare to meet with a child at an early period of its first rheumatic attack," as Dr. Sturges said in his recent lectures on heart inflammation in children, yet all these cases arising under observation during scarlet fever, their identity with acute rheumatism once admitted, would become so many valuable opportunities for investigating the earliest phases of rheumatism and rheumatic endocarditis.

[2] Loc. cit.

A CASE OF CARDIAC SYNCOPE UNDER CHLOROFORM; RECOVERY.

BY ROBERT BALLARD, M.R.C.S.ENG., L.R.C.P.LOND.

I HAVE read with much interest the able paper in THE LANCET of Nov. 17th on the Mechanism of Death under Chloroform, and wish to record a case occurring under my care which will not only help to substantiate the theory advanced by Mr. Alexander Wilson, but will also show the fallacy of applying to the higher organism of man the results obtained by experiments with chloroform on the lower animals.

The patient, a lad aged fifteen years, of a strumous habit, but otherwise healthy, was brought into the operating room for the removal of some necrosed bone in the lower third of the fibula. He was evidently very nervous, and whilst speaking a few words to him as he lay upon the table I noticed that his heart was beating rapidly and violently. I reassured him as to the result, and commenced the administration of chloroform in the usual way, but slowly, allowing him first to get accustomed to the vapour. The patient took the anæsthetic extremely well. There was no struggling or talking, and in the course of a few minutes the pulse had become slower, full, and quiet. The respiration from the commencement was regular, although somewhat deep. In

[3] Loc. cit.

from eight to ten minutes anæsthesia was complete, and the operation began. Up to this time only one symptom had presented itself which caused me any anxiety, and that was a marked pulsation of the superficial veins of the neck, which I had first noticed early in the administration when the lad was still conscious and excited. After he had been fully "under" for about ten minutes the pulse at the temporal artery suddenly became imperceptible; he took three or four deep inspirations and the breathing ceased, and then, but not until then, the pupils became widely dilated. I at once brought the patient's head over the end of the table and began artificial respiration. Hot water was poured over the chest, the tongue was forcibly drawn forwards, and nitrite of amyl on a piece of lint was placed over the nose and mouth. The effect of the nitrite of amyl was almost instantaneous. The heart began to flutter feebly and then to palpitate violently, the extreme pallor disappeared, the pupils contracted, respiration recommenced, and in the course of a few minutes the patient was out of danger.

There are several points of interest in this case. 1. The pulsation in the veins of the neck. This I regard as due to a temporary tricuspid regurgitation, such as has been observed in the normal heart during violent muscular exertion and mental excitement. I have mentioned that the patient was excited and that the pulsation referred to was first observed when he was still conscious. Such a condition, due as it is to mental causes, is obviously impossible in experiments on the lower animals. 2. The failure of the pulse was the first indication of danger. The alarming rapidity with which the subsequent symptoms developed points to primary failure of the circulation, and not to that of respiration, which continued after the pulse had ceased to be felt, and the ultimate cessation of which I regard as a secondary effect. 3. The pupil dilated only when the respiration ceased. In primary failure of the respiration dilatation of the pupil is an early sign, the origin of the third nerve being affected before the respiratory centre. In this case both were affected almost simultaneously, doubtless from anæmia due to the cardiac failure. The cause of the accident I hold to have been engorgement of the right heart following on temporary tricuspid regurgitation, assisted, possibly, by the direct toxic influence of the anæsthetic on the cardiac ganglia. The rapidity with which recovery took place after relieving the engorged heart by means of nitrite of amyl seems to uphold this view.

District Infirmary, Ashton-under-Lyne.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

DIPHTHERIA COMPLICATING MEASLES TREATED WITH ANTITOXIN.

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ON Oct. 24th a woman aged twenty-five years felt ill, and, after the usual premonitory symptoms, a copious measles rash appeared on the 27th. The case was uncomplicated till Nov. 4th, when the patient complained of sore-throat and headache; the temperature then was 99·5° F., the throat was red, and a small yellowish-grey patch, with a few smaller spots around it, was seen on the centre of the right tonsil. On the 5th the tonsil and part of the soft palate were found to be covered with a thick greyish-white membrane, and the temperature was 99·8°. On the 6th the membrane was found to have increased in thickness and extent, and a small patch had developed on the left tonsil. There was considerable glandular swelling at the angle of the jaw on the right side. The constitutional symptoms were not marked. The temperature was 99·8°, and the pulse 88, being rather soft and feeble. Microscopic examination and a cultivation proved the case to be one of true diphtheria. I therefore at 1 P.M. injected sixteen minims of antitoxin into the muscles of the back. The patient slept very little during the night. The next day (the 7th) the temperature, taken hourly, varied between 98·2° and 101°, and the pulse between 80 and 96. At 1 P.M. the temperature was 100·2°, and the pulse 84; the membrane was much thinner on the right tonsil; it was thicker, but very easily detached, on the right half of the soft palate and the uvula; two very small patches of apparently much feebler growth had developed on the left tonsil; another dose of fifteen minims of antitoxin was injected into the muscles of the back. On the 8th it was noted that the patient had not slept well during the night. The glandular swelling was much less; the right tonsil and the right half of the palate and uvula were practically clean; on the left side of the palate it was much thinner; the spots on the left tonsil had not increased. The temperature was 100·8° and the pulse 80 and not so soft. On the 9th the patient had slept better and took nourishment freely. The membrane was disappearing from the left side of the palate, and the spots on the left tonsil were hardly visible. At 11 A.M. the temperature was 100·8° and the pulse 80. On the 11th the membrane had quite disappeared and the patient felt much better. From this date she continued to improve, and on Nov. 17th was quite convalescent. The urine was normal at the beginning of the attack, and remained so all through. The case has an additional interest from the fact that the diphtheria complicated a well-marked case of measles in an adult. The result of the antitoxin treatment has again proved eminently satisfactory in my hands.

Aberdeen.

EXCISION OF BOTH KNEES FOR ANGULAR ANKYLOSIS.

BY G. P. NEWBOLT, F.R.C.S. ENG.,
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A MAN thirty-five years of age was admitted to the Stanley Hospital on April 17th, 1894, suffering from ankylosis of both knees at an inconvenient angle, complaining of pain and inability to walk or stand for more than a few minutes at a time, and then only with the aid of two sticks. The history he gave was that four or five years ago he was laid up with an attack of what he called "rheumatism" in the ankles for two months. From this he recovered perfectly. Rather more than two years ago his knees were attacked in the same way, and after being in bed for three months he recovered with his knees firmly fixed in their present condition. He denied having had gonorrhœa. For the last two years he had been going about walking on his toes with the aid of sticks, never being quite free from pain. On examination both knees were found to be flexed, the right the worst of the two, its popliteal angle being about 70° and that of the left about 73°. There were no scars or marks of abscesses about the joints, and the soft parts around were normal. On April 27th an attempt was made to straighten the right knee under chloroform, but this failed; the knee was then placed on a Thomas's knee-splint, and I tried to straighten it gradually by extension and counter-pressure, but this also ended in failure. On May 18th the left knee was excised; the ankylosis was bony and the patella was firmly ankylosed to the femur and tibia. After freely using the chisel the tibia was separated from the patella and femur, and a slice was taken off its upper surface; a wedge-shaped piece was then taken from the patella and femur, and the limb was brought straight and fixed on a back splint. The wound healed by first intention, and on June 1st was fixed in a plaster case. On June 22nd the right knee, which was still tender and a little swollen from the forcible extension to which it had been subjected, was excised. The condition found was not quite the same as in the left; there was fibrous tissue mixed with the bony ankylosis, and the crucial ligaments were represented by a gelatinous mass. I was able to wrench open the joint without using the chisel very much. I adopted the same method as in the first operation, fixing the bony surfaces together with stout green gut sutures. This wound also healed by first intention, and was put up in plaster on July 22nd. On Nov. 1st I showed the patient at the Liverpool Medical Institution; he was able to walk well and could get about all day without feeling tired, had no pain in the knees, and expressed himself well pleased with the result. He gets over level ground at a good rate and ascends

stairs by circumducting and swinging the limbs at the hips. He gets downstairs by holding on to the balustrades and coming down sideways or, better still, by descending backwards. I imagine that the cause of the deformity was gonorrhœal rheumatism, though I obtained no history of gonorrhœa from the patient. The condition of the joints found on operating rather strengthens that opinion. I unfortunately did not obtain photographs of the condition before operating.

Liverpool.

UNUSUAL INJURIES CAUSED BY LIGHTNING STROKE.

BY R. H. E. KNAGGS, M.R.C.S. ENG., J.P.,
GOVERNMENT MEDICAL OFFICER, TRINIDAD, WEST INDIES.

ON Oct. 17th a coolie at work in an open cane-field was killed by a flash of lightning. I was within 500 yards of the spot at the time and saw the flash, which was a multiple discharge descending and returning several times. I saw the man about fifteen minutes after the occurrence; he was quite dead and there was no rigidity. There was a lacerated wound of the right ear, which had been almost torn off in an upward direction, and the hair of the head, worn long after the coolie custom, appeared to have been shaved off the right side in a vertical direction for a space of about six inches by two. There was a small abrasion on the right shoulder over the acromion process. These were all the external wounds found on a minute examination of the body, but the interest of the case appeared when, at a later stage, I opened the head. Sanious fluid was then observed running from the dependent nostril, and rigor mortis, sixteen hours after death, was very marked. A large hæmatoma had developed over the right parietal region, and on reflecting the scalp an extensive fracture of the skull was found. It started as a fine fissure from the left side near the parietal eminence, crossing transversely to the right side, and extending into the base. On removing the calvarium and viewing it by transmitted light fine fissures were seen radiating from the main fracture across the right parietal bone. There was an excess of cerebro-spinal fluid. The surface of the brain was injected a bright pink, and the vessels of the meninges were gorged with fluid blood. The staining was most marked in the arachnoid in the neighbourhood of the brain fissures. The brain itself was abnormally soft, not from decomposition, but there was no laceration of its substance, nor was there any staining of the deeper tissues. Having removed the brain the fracture could be traced running across the middle fossa, then through the orbital plate of the frontal and the cribriform plate of the ethmoid—hence the bleeding from the nose. All the other organs of the body were healthy, nor was there any thoracic or abdominal injury. The heart was stopped in diastole and the blood fluid, but a few post-mortem clots had begun to form. The nature of the injuries and the fact that a felt hat which he had on at the time was blown several feet away and badly torn point to the conclusion that an upward discharge passed through his body, and as these upward discharges usually cause most damage to buildings the unusual and extensive head injuries may be accounted for. Notwithstanding our frequent and violent storms, death by lightning stroke is comparatively rare. A fellow labourer a few yards off received a severe shock; his senses were blunted and there were left external strabismus and dilatation and insensibility of the pupil, and acute conjunctivitis (of the left eye only) followed. Under treatment—cocaine bromide and exclusion of light—these symptoms passed off and he was none the worse for his close shave.

Couva, Trinidad, West Indies.

ROYAL BRITISH NURSES' ASSOCIATION.—The first sessional lecture of the season was delivered at 17, Old Cavendish-street, on Friday, Nov. 16th, before an appreciative audience by Mrs. Hughes of Kersall, Manchester, the subject being "Why Trained Nurses break down in Health." The chair was taken at 8 P.M. by Dr. Gage-Brown, C.M.G. An interesting discussion took place at the conclusion of the lecture on the various points raised of special interest to nurses.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

VICTORIA HOSPITAL FOR SICK CHILDREN, CHELSEA.

INFLAMED AND IRREDUCIBLE OMPHALOCELE OR CONGENITAL UMBILICAL HERNIA; OPERATION; DEATH; REMARKS.

(Under the care of Mr. D'ARCY POWER.)

CASES of irreducible congenital umbilical hernia are not frequently met with, and as the condition is so rare the medical attendant is, perhaps, not quite ready to treat the condition with the promptitude which it demands. He may find that there are no symptoms of strangulation, and hopes that the swelling will disappear without operation; it does not do so, and the child dies in two or three days from peritonitis. It is to be remembered that this hernia differs from others in the same situation as regards the coverings of the sac. Those which are formed of the same material as the umbilical cord soon lose their vascularity and die, so that adhesion of the sac to the contents takes place very soon after birth, even if no adhesions had formed in utero. The hernia is early irreducible, and soon covered by a decomposing envelope. Much responsibility therefore rests on the medical man who first sees a child suffering from this condition, for taxis must be tried as soon as possible, followed by operation if not successful. There must be no waiting for symptoms of strangulation. When vomiting comes on it is usually a sign of peritonitis, and the prognosis is then extremely bad. We are indebted for the notes of the case to Mr. C. S. Pantin, house surgeon.

A male infant aged two days was admitted to the Victoria Hospital for Sick Children, Chelsea, on Aug. 29th, with a tumour involving the proximal portion of the umbilical cord. The swelling was oval, of a lemon yellow colour, and opaque. It was covered with a funnel-shaped collar of healthy skin, which terminated abruptly in the umbilical cord. The remains of the umbilical cord attached to the under surface of the tumour were gangrenous and offensive. There was no difficulty in recognising the tumour as an omphalocele in a state of acute inflammation, and when taxis was applied its contents gurgled, but it proved to be quite irreducible. The child was healthy and free from any other defect; the bowels had been opened three times since birth, but the infant had been sick twice on the day of admission to hospital. Mr. Power therefore determined to operate. He made an incision over the front of the tumour to avoid its gangrenous under surface. The incision showed that the wall of the sac was very thick and tough, and that its opacity was due to a thick layer of yellow lymph. The sac wall was so closely connected with the intestine which it surrounded that it could only be separated by gently peeling it off with the finger-nail. The intestine revealed by turning back the sac consisted of a mass matted together by tough layers of lymph, the vermiform appendix alone being recognisable. The mass was gradually unravelled until it became clear that it consisted of the cæcum, with the vermiform appendix and portions of the ileum and colon, about eight inches of intestine in all. The gut was very greatly congested and the cæcum felt hard and thickened, but no part of it was gangrenous. There were firm attachments between the intestines and the umbilical ring at the point where they left the abdominal cavity. The adhesions were removed, the intestines were separated from each other, and, as moderate pressure failed to pass them through the umbilicus, the abdominal wall was laid open in the middle line for a short distance. The sac was then cut through at its collar of healthy skin and removed. The intestines were washed first in a hot solution of carbolic acid (1 in 40), afterwards with boiled water, and they were then put into the

peritoneal cavity, the cæcum, on account of its hardened and contracted condition, being the most difficult to replace. The wound was loosely closed with sutures of horse-hair and silver, and antiseptic dressings were applied. The greatest care was taken throughout the operation to save the patient from shock by keeping the limbs and chest wrapped up and by laying him upon a hot-water bed. He rallied quickly from the collapse of the operation, but hiccough and vomiting set in, so that it was necessary to feed him with nutrient enemata. The infant died twenty-four hours later. Some slight general peritonitis was found at the necropsy, and the bowel which had been contained in the hernia was seen to be greatly thickened.

Remarks by Mr. D'ARCY POWER.—This is the second case of strangulated omphalocele which has come under my notice. The first one, recorded and depicted in vol. xxxix. of the Pathological Society's Transactions, also proved fatal. There is no more reason why these cases should be hopeless than an ordinary case of strangulated inguinal hernia, for the same treatment is applicable to both forms of rupture. There seems to be a prejudice against making any attempt at taxis in congenital umbilical hernia, though there is no doubt that if it be applied early the gut can in many cases be put into the abdominal cavity. If taxis be delayed, on the other hand, the slight inflammation attending the separation of the umbilical cord becomes greatly exaggerated, involves the sac with its contents, and soon spreads to the peritoneum. It is then too late to do anything, and the child dies. Early taxis is called for in these cases, and the greatest care should be taken to prevent the cord becoming septic during the process of its separation. The surgeon should perform an abdominal section as soon as he has satisfied himself that taxis is useless, and he should remember that every minute he delays jeopardises a successful result, for the inflammatory processes in young children are very rapid. I proposed in the present case to remove the intestine contained in the sac had it proved to be gangrenous, and to unite the proximal and distal portions at the nearest healthy parts; but, as the gut was only congested, I was spared the necessity of performing the more serious operation.

SUSSEX COUNTY HOSPITAL.

A CASE OF TUBERCULOSIS; ANÆMIA; PYREXIA; ENLARGED LIVER AND SPLEEN; ASCITES; JAUNDICE.

(Under the care of Dr. A. J. RICHARDSON.)

IT is frequently impossible to diagnose a general tuberculosis, especially early in the disease. The following account is that of a case in which it was especially difficult to make a diagnosis during any stage of the illness, and in which the occurrence of jaundice and pyrexia with splenic enlargement present unusual symptoms. Dr. Richardson, to whom we are indebted for the notes of the case, refers to somewhat similar cases in his remarks.

A man forty-two years of age came to the out-patient department of the Sussex County Hospital on Dec. 14th, 1893, complaining of "aching all over." He had been gradually failing in health for about a month. He had had influenza two years previously. He was suffering from slight cough and a little night sweating, but there was no hæmoptysis. His appetite was very bad; the tongue was densely white stippled, and the bowels were confined. Nothing abnormal was noticed in the heart or lungs. He was very anæmic, and the spleen was enlarged. He had always lived in Brighton and had never had ague. He was ordered two grains of quinine thrice daily and an aloin pill. On Jan. 11th, 1894, the hæmoglobin was 50 per cent.; there was no optic neuritis or retinal hæmorrhage; cup deeply marked. On Feb. 22nd he discontinued attendance, feeling nearly well, and went to work for seven weeks.

On May 17th he again came to the hospital complaining of retching and loss of appetite; the tongue was very white, and the bowels were rather loose. There were no cardiac bruits, even on lying down. Rhonchi were audible over both lungs, and although the spleen could not be felt it gave an enlarged area of percussion dulness. The pulse was of low tension; the urine was intensely acid, dark orange in colour, and free from albumen. There was no clouding on heating, but a few drops of acetic acid then added gave a distinct cloud, probably due to mucin. He was admitted as an in-patient on June 18th. The temperature was 101° F., the pulse 136, and the respiration 18. There was flattening at both apices, but no dulness. Sibilant rhonchi were heard over the front of the chest, with râles in the supra-clavicular fossæ. Crepitations were audible at both bases. The liver edge was three inches below the ribs, the surface being smooth. The spleen was enlarged; there were numerous petechiæ over the abdomen, legs, and arms. The patient had a very sallow aspect, but was not jaundiced. The hæmoglobin was 30 per cent. and the red corpuscles 60 per cent. There was no increase in the white corpuscles. No sputa could be obtained in which to search for bacilli. The sp. gr. of the urine was 1026, acid; no albumen was present. On June 19th the temperature reached 103·6°; it began to fall on the 21st, and by the 23rd was normal. Two days later the spleen was notably smaller. On the 26th the temperature reached 99° in the evening. The spleen was a finger's breadth below the ribs. The temperature continued to rise until July 4th, when it reached 103·8° in the evening, and the spleen was three fingers' breadth below the ribs. On the 13th he perspired very freely, and the temperature fell to 97°, the spleen being distinctly smaller. On the 17th the spleen could not be felt. On the 23rd there was severe pain in the left hypochondriac region. The next day there was ascites; the temperature was 100·6°. The note on Aug. 16th was as follows: "The temperature has varied since the 24th, sometimes reaching 102°. The patient is jaundiced; the urine and fæces bile stained; the ascites does not increase." He died on Aug. 26th.

Necropsy.—There were numerous old pleuritic adhesions, especially at the apices. Fluid was present in the left chest. Both apices were studded with small, hard, greyish bodies, about the size of millet seeds. In the right apex there were cretaceous masses and small vomicæ. The remainder of the lungs was congested and œdematous, but not studded with tubercle. The heart was large, flabby, and dilated; the muscular substance was softish and bile-stained. The tricuspid orifice admitted four fingers with ease, the mitral three. The aortic valves were competent, and the first part of the aorta was atheromatous. The abdomen was filled with clear, yellow fluid. Both layers of peritoneum were studded with minute grey granulations not so large as a pin's head. The intestines looked as though they had been freely sprinkled with wet white sand. The mesenteric glands were enlarged. The liver was very large, pale, and fatty. The gall-bladder was not distended. The spleen was much enlarged and soft. The kidneys were pale and fatty, and peeled smoothly. Although many sections were made at the necropsy through the liver, spleen, and kidneys, no tubercles could be seen in them.

Remarks by Dr. RICHARDSON.—There are several points of interest in this case. At no time was there expectoration in which to make a satisfactory search for bacilli, although the house physician (Mr. Mallam), believing the case to be tuberculous, was most anxious to make such examination. Dr. Hollis (under whose care the patient was placed on admission to hospital on June 18th) particularly noted the large size and firm consistence of the spleen and the rapid changes in size which occurred coincidently with variations in temperature. The occurrence of jaundice in a case of tuberculosis was noted by Murchison in 1867.[1] The liver in that case, although looking fatty, was firm and tough, and on microscopic examination was found to contain numerous miliary tubercles. Unfortunately no microscopic examination was made in the above case, but the liver was distinctly soft, with a rounded border. In 1875 Hilton Fagge noted a similar case to Murchison's in the Guy's Hospital Reports. The fact that tubercles were found in the liver is the very pith of these cases. In *Progrès Médical*, 1892,[2] Pilliet relates a case of tuberculous peritonitis and ascites with fatty degeneration of the liver; but in the above case the fatty liver may well be considered as connected with the old lung rather than the recent peritoneal lesions. Mr. Conolly Norman's case,[3] although agreeing as to emaciation, sallowness, jaundice, and ascites, yet differs inasmuch as there was a definite abdominal tumour. The difficulty, if not impossibility, of a certain diagnosis was great. Such a careful observer as Fagge, in the Reports quoted above, says that the concurrence of jaundice with ascites is met with in scarcely any disease but cirrhosis of the liver and cancer. The resemblance of the case to Banti's splenomegaly with cirrhosis hepatis[4] was striking. Thus the anæmia with splenic tumefaction was an early sign, followed later by ascites, in the absence of history of alcoholism, syphilis, or malaria.

[1] Diseases of the Liver, second edition, p. 246.
[2] Abstracted in Virchow's Jahresbericht, 1893.
[3] THE LANCET, April 1st, 1893.
[4] Med. Week., vol. ii., pp. 264, No. 31.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

Malignant Disease of Larynx.—Acute Septic Epiphysitis.—Malignant Disease in Glands of Groin with Secondary Growths in Skin.—Epitheliomatous Cysts of Neck.—Wolffian Adenoma of Kidney.

AN ordinary meeting of this society was held on Nov. 20th, Dr. PAVY, President, in the chair.

Mr. STEPHEN PAGET brought forward a specimen of Malignant Disease of the Larynx. The case was that of a man aged sixty-four years. The signs of obstruction had been present for seven months. On his admission to the West London Hospital on June 23rd a large, hard, ulcerated mass in the neighbourhood of the arytenoid cartilages could be seen with the laryngoscope and felt with the finger. Tracheotomy was performed, on account of urgent dyspnœa, three days after his admission. The pharynx became obstructed and he died on Aug. 3rd. Post mortem the whole of the pharynx was found completely blocked by a large growth, the size of a walnut, which arose from the back of the right arytenoid cartilage and from the back of the cricoid. As compared with the size of the growth its base was so small that it might almost be called a pedunculated growth. The lymphatic glands were not diseased. Mr. Paget thought that the aspect of the growth and its microscopic characters were in favour of its being a myeloid sarcoma. If this were so the case was a very rare one; out of twenty-three cases of sarcoma of the larynx collected by Mr. Butlin in his work on "Malignant Disease of the Larynx" only three were of "extrinsic" origin; two of these grew from the epiglottis, and one from the posterior aspect of the larynx. The patient's age, moreover, had passed beyond the period at which sarcoma of the larynx most frequently occurs. Mr. WILLETT remarked that the specimen resembled carcinoma rather than sarcoma.—Mr. SHATTOCK said that the absence of ulceration or necrosis in cancer was rare, but notwithstanding this he regarded the growth as a squamous-celled carcinoma. He had recently examined a very similar specimen. The specimen was referred to the Morbid Growths Committee.

Mr. STEPHEN PAGET likewise showed a specimen of Acute Septic Epiphysitis from a boy aged thirteen years, who was admitted to the West London Hospital on Aug. 23rd, having fallen down a lift. He had a severe scalp wound and a compound fracture of the lower jaw in two places. His general condition was so bad that it was impossible at first to perform any operation to bring the fragments of the lower jaw together. Four days later there was acute swelling of the whole of the left thigh, with heat, redness, pain, dilatation of the superficial veins, and effusion into the knee-joint. An incision was at once made down to the bone, but without finding pus. The swelling was for a time greatly diminished, but three days later it was necessary to make more incisions, and the outer aspect of the lower end of the bone was found bare, in a large abscess cavity. He had also swelling of the left parotid gland, which was at once freely incised, and subsided without suppuration. In spite of the most careful nursing bedsores formed; large abscesses also formed in the left supra-scapular fossa and in the gluteal region. Later it became evident that the knee-joint was involved, and the limb was amputated on Sept. 18th. The shaft of the bone was infiltrated with pus, and had to be scraped out almost up to the neck. The stump did fairly well, but the boy's condition became one of chronic pyæmia, the lungs became affected, and he died ten weeks after the accident. Pus was found in the right pleural cavity, and there were pyæmic abscesses in both lungs.—Mr. GOLDING-BIRD did not think the title of the paper correct. It was a case of acute pyæmia from the first, the wound being probably inoculated with a streptococcus. He related a case of acute epiphysitis of the upper end of the humerus in order to point out the kind of case to which this term should, in his opinion, be applied.—Mr. PAGET, in reply, said he did not doubt but that the case was one of pyæmia, though in some respects, such as the marked absence of rigors, it was irregular in type. There was no associated tuberculous mischief.

Mr. C. A. MORTON showed a Malignant Growth in the Glands of the Groin following the subsidence of a painful enlargement of the glands, with Secondary Growths in the Skin at a distance from the primary tumour. The glands of both groins were enlarged and very painful, and then, on the subsidence of this condition, malignant growth appeared in those of one side. The patient was a man forty-one years of age under Mr. Morton's care in the Bristol General Hospital. Many months later a similar growth appeared in the glands of the other groin, and secondary growths in the skin and subcutaneous tissue of the abdominal wall, and in the lungs. The spleen was not affected. There was no source of primary irritation. The histology of the growth was that of sarcoma rather than lymphadenoma; but the clinical history suggested that the disease was not simply primary sarcoma of the glands. A case recorded by Professor Greenfield, in vol. xxvii. of the Transactions of the Society, was referred to, in which in lymphadenoma secondary growths formed in the skin; and the relation between lymphadenoma and sarcoma was discussed.—Dr. ROLLESTON asked whether the case could be regarded as due to specific inflammatory mischief, such as glanders.—Dr. SNOW remarked that the primary growth consisted of small lymphoid cells, while the secondary growth was quite unlike it, being composed of spindle cells. A point against malignancy was that the glands in the groin on each side were simultaneously enlarged.—Mr. BOWLBY said that a considerable number of cases which had been classified clinically as instances of Hodgkin's disease had shown post mortem growths in the glands, liver, and spleen which were not like lymph gland tissue, for, in addition to lymphoid tissue, there were masses of hard, white growth composed of large round and spindle cells, many of which were multi-nucleated. Most of the fatal cases showed sarcoma cells in addition to glandular elements.—Dr. WOODHEAD said that the classification of these cases required to be revised, for the process really appeared to be a specific infective one. A number of diseases presenting these same general characters have been classed together as lymphadenoma—e.g., the disease known under that name in the horse was simply a rapidly advancing tuberculosis. Others might be instances of chronic glanders, the pathological characters of which differed in different individuals. The case shown differed from many described cases of lymphadenoma, in which the secondary growths precisely resembled the primary.—Dr. PITT hesitated to assume that spindle cells were met with in true lymphadenoma. Cases which would be clinically classified as lymphadenoma sometimes turned out to be sarcoma or tubercle. In many cases the cells remained of a round, undifferentiated character, and these rarely fungated. In other cases the growth fungated and perforated, sometimes into a bronchus, and the microscopical appearances then usually resembled sarcoma.—Mr. MORTON, in reply, did not think the question of glanders was admissible. There was some surface suppuration, but there was no abscess formation in the mass of the growth.

Mr. BOWLBY showed an Epitheliomatous Cyst of the Neck from a man aged fifty-eight years; the tumour had been noticed about two months before death. On the right side of the neck was a large swelling covered by dark purple skin, which was tightly stretched and thinned. The swelling was oval, and lay with its long axis from above downwards; it measured 8 in. by 4 in., and occupied almost all the right side of the neck. Fluctuation was very distinct, but the deeper part of the mass was hard and fixed. There appeared to be no disease of any mucous membrane or of the skin in the neighbourhood, and as the case resembled very closely the epitheliomatous cysts of the neck previously shown and described before the Pathological Society it was concluded that the tumour belonged to this class. As the cyst was nearly bursting it was incised, and about half a pint of blood-stained serum was evacuated, and its wall was found to be studded with tuberous masses of new growth. An examination of one of these showed that it consisted of squamous-celled epithelioma. The patient died two weeks later, and a post-mortem examination showed that the cyst was deeply placed in the triangles of the neck, but it had not originated from the skin or from the mucous membrane of the throat, air passages, or œsophagus, and that the tumour was evidently the result of epithelioma originating in the wall of some epithelial-lined passage, as the cyst was not at all like the degeneration cysts often met with in new growths. The origin of the tumour was believed to be the epithelium of one of the branchial clefts.

Mr. F. C. WALLIS showed and read notes of a case of Cystic Epithelioma of the Neck. The patient was sixty years of age, and noticed the swelling six weeks

before he went to Charing-cross Hospital in January last, when he exhibited a swelling, the size of an orange, situated over the anterior border of the sterno-mastoid; the skin was red and adherent; the growth, fixed to the deeper structures, was very hard at the base, fluctuating at the upper part. The growth increased rapidly in size and was tapped, three ounces of clear straw-coloured fluid being drawn off. Under the microscope there was nothing suggestive to be seen. The growth eventually fungated, and the man died. A section of the growth showed typical squamous-celled carcinoma. There was no evidence of any other growth to which this might be secondary.—Dr. SNOW said that in many of these cases on careful search a minute scar would be found, generally on the mucous membrane of the lip, indicating the site of a primary growth which had been removed.—Mr. BLAND SUTTON said these cases were of great clinical importance on account of the rapidity with which they proved fatal. They had been described by German writers as "branchiogenous carcinoma," and by English pathologists as "malignant cysts." He had seen about ten cases during the last five years, all resembling each other in the rapidity of their growth, in their simulation of abscess, and in their fatal tendency. If these tumours arose in the branchial clefts they would probably appear in infancy or youth, and not after mid-life. He regarded the cervical lesion as secondary, the primary lesion being some small neoplasm hidden away, perhaps in a pharyngeal recess, and easily overlooked. One of the cases he had seen owned such an origin. In one of the cases Mr. Treves had described there had been an operation on the lip, and glands had been dissected out from one side of the neck, and the so-called branchiogenous tumour developed on the opposite side.—Mr. SHATTOCK doubted if the epithelioma in a branchial cyst was usually squamous. He had recently investigated a case and found that the epithelium was columnar and ciliated. The chief part of a branchial cyst appeared to be formed of the pharyngeal diverticulum, and ought therefore to be lined with columnar cells like the primitive pharynx.—Mr. TARGETT referred to Mr. Butlin's cases of apparently primary epithelioma in glands, and said he had met with two such cases; one was an elderly woman, and the inguinal glands were morbid, and in the other the glands along the iliac vessels were affected, the bladder being hypertrophied, but containing no malignant growth.—Mr. SUTTON added that in the case of a man who died with a large mass of glands in his groin the primary growth was a small papule in the scrotum, which was so small as to be overlooked at the necropsy.—Mr. STEPHEN PAGET asked if there had been evidence of a previous cystic swelling in Mr. Bowlby's case.—Mr. BOWLBY, in reply, said that there was no trace of a primary growth in his case. He had seen a case of primary epithelioma of the glands of the groin in an old woman. These cases of epitheliomatous cyst did not run the usual course of secondary glands; the cysts in the latter were neither so large nor so regular. As in the branchial clefts, there was a meeting of two kinds of epithelium; it was possible for cysts originating in them to be lined with either squamous or columnar cells. The cysts would arise from a pre-existing potential cavity.—Mr. WALLIS, in reply, said that the clinical features and the characters of the fluid removed were quite different from secondary carcinomatous glands.

Mr. S. G. SHATTOCK exhibited microscopic sections of an Adenoma of the Kidney of a Child. The tumour itself was of large size and was quite distinct from the kidney substance. Mr. Shattock discussed the reasons for thinking that such growths arose in the Wolffian body; he did not himself see that any proof had yet been adduced on this question. The first specimens of striped myo-sarcomata of the kidney recorded in this country were those exhibited at the Pathological Society in 1882 by Mr. Eve and Dr. Dawson Williams. The Morbid Growths Committee, in reporting upon these, clearly hinted that a columnar character of the glandular epithelium in such tumours would point to its possible origin in the Wolffian body. Mr. Shattock maintained that there was nothing in the epithelium of the Wolffian body or in its structure generally which differentiated this from the permanent kidney. In the adenoma which he exhibited the glandular tissue was of the tubular type and the epithelium of a long columnar kind, limiting distinct lumina; mingled with this there were solid cylinders of epithelium in which a glandular lumen had not yet developed; the first result, however, was a columnar-celled tubular gland. By the side of the section he showed one of the Wolffian body and kidney in a human fœtus of six weeks. The Wolffian body, which lay in front of and quite distinct from the kidney (and Professor Schäfer had been kind enough to examine his preparation), presented an early formation of glomeruli, and at one spot tubuli of the convoluted renal type lined with granular epithelium. The tubular structure otherwise was as yet without lumen and of columnar epithelium. What he wished to emphasise, however, was that the kidney in the early stage of its development presented precisely similar appearances; indeed, its structure was absolutely indistinguishable from the tumour in question. He recalled the fact that the ureter was developed as a diverticulum of the Wolffian duct, and that recent observations had shown that the whole of the kidney was developed from this diverticulum. Morphologically and histologically, therefore, no distinction existed between the kidney and the Wolffian body. And such tumours might equally well arise in aberrant portions of embryonic renal tissue as in residues of the Wolffian body. The presence of striped muscle fibre in such adenomata proved nothing, for as these fibres were elements displaced from the muscle plates they might as well affect the kidney as the Wolffian body. Sabourin had fully discussed the small adenomata of adults; in those he (Mr. Shattock) had examined the epithelium was of the cubical kind, but Sabourin had found it in some such to be columnar; such growths were almost invariably associated with chronic interstitial nephritis, to which they bore an obvious etiological relation. In regard to Dr. Snow's suggestion of naming such tumours "blastomata," Mr. Shattock pointed out that it would lead to confusion by introducing what could not be regarded as a histological term conveying any idea of structure; it was not difficult to name any tumour on the principle laid down by Virchow. Were the terms used as a prefix—e.g., blasto-adenoma—to signify a growth arising in or developing in as distinguished from merely growing tissue, its introduction would not be open to such objection, and he was inclined to make this suggestion.—Dr. SNOW remarked that as these tumours usually contained a multiplicity of structures it would be difficult to find a term to include the whole of them.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY.

Adjourned Discussion on Diphtheria.

A SPECIAL adjourned meeting of this society was held on Nov. 16th, Mr. F. LAWRANCE, Vice-President, being in the chair.

Mr. LAWRANCE introduced the adjourned discussion on Diphtheria, and referred to a case which had been imported from Boulogne and was supposed to be the first case of the disease in England. He commented on the increase in the number of reported cases since the Notification Act.

Dr. BENNETT was satisfied with the existing means of diagnosis, and considered that the bacteriological examination of suspected cases was not only unnecessary, but might waste valuable time in treatment, with regard to which he considered that a mixture containing sesquichloride of iron, chlorate of potash, and hydrochloric acid was most efficacious.

Dr. BALL related the notes of a severe case of diphtheria which he had treated at the West London Hospital with Aronson's antitoxin serum with striking success. He then discussed the relative merits of tracheotomy and of intubation, and urged a more extended use of the latter. His own experience of thirty-two cases of intubation convinced him that this operation gave results at least equal to tracheotomy, and as it was a bloodless one the consent of parents was much more readily obtained. He also referred to the value of intubation in certain troublesome cases when after tracheotomy the tube could not be dispensed with.

Dr. SCANES SPICER considered that to diminish the spread of the disease was as important as to cure it. He pointed out the increased liability to diphtheria among children suffering from enlarged tonsils, adenoids, or other disease of the pharynx; he also stated that the crowding of such cases in schools was a fertile means of spreading diphtheria, and therefore suggested that a systematic throat inspection (together with necessary treatment) should be made in Board and other schools. This, in his opinion, would diminish the ravages made by diphtheria and scarlet fever in such schools.

Dr. HILL considered that bacteriological examination, as

carried out under the American system, could not be conclusive when it gave a negative result, since no bacilli might be present on the part of the throat which had been swabbed. He referred to several cases of diphtheria where there had been no faucial symptoms.

Dr. ABRAHAM showed the New York apparatus for the bacteriological examination of suspected throat disease, and explained the system. He also pointed out that the bacillus could be detected on the fauces some days after the disappearance of the membrane.

Dr. COLMAN referred to passages in writers early in the Christian era which appeared to be clearly descriptive of diphtheria. He emphasised the importance of observing the knee-jerk, since it was often absent for a few days during the acute period of the disease without any other paralytic symptoms appearing. In cases where the membrane had cleared off its absence might establish a diagnosis. In treatment he deprecated the use of brushes and recommended sprays; he repeated what he had said on the paramount importance of abundant cubic space and frequent changes of air.

Mr. PART differed from those who made light of local treatment, and stated the excellent results of local antisepsis both in cutting short the disease and in avoiding dangerous sequelæ. He considered that should the local antiseptic treatment be efficiently carried out the mortality from diphtheria would decrease in hospitals.

Mr. LAKE pointed out that, while the temperature remained normal in true bacillus diphtheria, in cases of the disease due to cocci or to a mixture of bacilli and cocci it was high. He urged the importance of distinguishing between the two forms on account of the danger which the cases of coccus diphtheria ran of contracting true diphtheria if treated in the same ward.

Dr. CAGNEY regarded paralysis as a part, rather than a sequela, of diphtheria, and dwelt on the importance of being able to recognise diphtheritic neuritis and to distinguish it from other forms, such as the alcoholic; its remarkable tolerance of strong faradaic currents was a useful indication. He referred to Dr. Martin's two toxins of diphtheria, the first an albumose manufactured and virulent locally, the second an organic acid elaborated in the spleen and having a more general action—the latter, he considered, was the cause of neuritis.

Dr. DUDFIELD referred to the excellent effect of the internal treatment with iron together with the local application of crude paraffin. He discussed the reputed errors in notification of diphtheria, but stated that the death-rate among cases treated in hospital was very little higher than among those treated at home. He mentioned an outbreak of diphtheria occurring in a newly built house, where it was found that the house was built on made ground consisting of all sorts of refuse and without any concrete under the foundation. A faulty drain was found. In his opinion there was some relation between heavy rainfall and diphtheria.

Dr. POPE, in closing the discussion, reviewed the opinions of the other speakers.

*** At the meeting of this society on Nov. 2nd we reported Mr. Lennox Browne as having said that "the amount of membrane in any case (of diphtheria) was the essential factor towards a fatal result." Mr. Browne writes to us to say that his words were "an essential factor," and were used in contradiction of the assertion of a previous speaker that "where the membrane was especially abundant the prognosis was favourable." We see that at the meeting in question we reported Dr. Donald Hood as having used those words with the three words "in some cases" prefixed, which words we would point out to Mr. Browne make a good deal of difference.—ED. L.

BRISTOL MEDICO-CHIRURGICAL SOCIETY.

Exhibition of Cases and Specimens.—Aortic Valve Disease.—Chloride of Calcium.

THE second meeting of the session of this society was held on Nov. 14th, Dr. HARRISON being in the chair.

Mr. MORTON showed a patient with Congenital Deficiency of Junction between the Ribs and Sternum.—Dr. WALDO exhibited a patient with Lichen Ruber Planus et Acuminatus.—Dr. HARRISON showed a patient with Lichen Planus.—Mr. BARCLAY brought before the notice of the members a patient with a very useful hand after Complete Excision of the Wrist for Disease following an Injury.—Mr. GREIG SMITH exhibited: (1) Two Calculi removed by Suprapubic Operations; (2) a Malignant Growth removed by the operation of Pylorectomy; (3) a specimen of Resection of Malignant Stricture of Colon; (4) a Papillomatous Growth in an Ovarian Cyst; (5) an Ovarian Cyst showing a large number of Secondary Growths equally distributed over the whole of the Cyst Wall; and (6) a large Uterine Fibroid that had caused Obstruction from Pressure on the Rectum.—Dr. M. CLARKE showed specimens of Hæmorrhages in the Pons Varolii.

Dr. MICHELL CLARKE read a paper on Aortic Valve Disease, in which ulcerative change supervened and in which the pulsus bisferiens occurred.—Mr. Munro Smith, Mr. Barclay, Dr. Harrison, and Dr. Rogers made remarks on the paper.

Dr. PARKER then read a paper on Chloride of Calcium, advocating its use in various cases of hæmorrhage.—Dr. Shingleton Smith, Dr. Elliott, Dr. Clarke, Dr. Edgeworth, and Dr. Harrison discussed the subject.

LIVERPOOL MEDICAL INSTITUTION.

Chronic Tetanus treated by Antitoxin.—Discussion on Rabies.

A MEETING of this society was held on Nov. 15th, Mr. CHAUNCY PUZEY, President, being in the chair.

Mr. RUSHTON PARKER related the case of a boy fourteen years of age, who came under treatment on Oct. 19th, suffering from Trismus, General Muscular Rigidity, and severe Clonic Spasms of six days' duration. These were apparently due to a splinter embedded in the right thumb for four or five weeks. The splinter was removed on admission, but no pus was found then or since. There was risus sardonicus, and the trunk and lower limbs were stiffened straight; the upper limbs were hardly affected. The first day two injections of carbolic acid were made under the skin (half an ounce of a 1 in 20 solution). The next day antitoxin was given subcutaneously (2½ grammes of dried serum from an immunised horse dissolved in ten parts of boiled distilled water). On six subsequent days a dose of one quarter the first was similarly given. The clonic spasms numbered seventy the first night and next day after admission, then thirty, thirty-five, twenty-four, thirty-four, twenty-one, eight, five, and finally one. After a week's treatment he was so far recovered that nothing further was done except to feed him well. The case was one of chronic tetanus and the antitoxin appeared to have sensibly mitigated the disease and led to its disappearance; but of this there can be no certainty. About 50 per cent. of such cases appear to get well under various methods of treatment and perhaps under no treatment at all; but if the mortality of 50 per cent. be greatly reduced in cases treated by antitoxin the profession may be enabled to place real confidence in its efficacy. At present, at any rate, it appears to be the only scientific remedy yet suggested.—Dr. Harris, Dr. Glynn, Mr. Paul, Dr. Carter, and Professor Boyce made remarks on this case.

Dr. A. C. E. HARRIS introduced the discussion on Rabies by reading two cases which occurred in his practice—one of the paralytic and the other of the convulsive form. The paralytic case was in a man who was bitten in India, and who received his first inoculation in Paris twenty-two days later; he became ill twenty-five days after this, and died on the eighth day. The convulsive case began twenty-three days after the bite, and death ensued in about forty hours. Dr. Harris supported the following: There is such a disease as human rabies. It belongs to the infective order of diseases, the specific virus being transmitted by the nerves to the motor centres of the brain and cord, the period of incubation depending on the tissue inoculated. Clinically, a convenient division is into the paralytic and the convulsive, the former not being an outcome of Pasteur's method. For prophylaxis a muzzling order for the entire country should be issued from a central authority; for treatment in the actual disease Pasteur's inoculations are by far the best, and in this, or some variation thereof, his hope for the future lay.—Dr. BARRON thought Dr. Harris's two cases were most interesting, the one being a case of purely paralytic rabies without any mental symptoms, and the other a case of furious rabies without any paralysis. Both conditions were very rare, as in most paralytic cases there were some mental symptoms and in the bulk of furious cases there was some amount of paralysis before death, commencing most frequently

in the neighbourhood of the bite. He alluded to M. Pasteur's "double hecatomb"—a supplement issued with the November number of the *Zoophilist*—which, giving all the deaths *after* the Pasteur treatment since August, 1885, as 267, shows (not less than 20,000 having been treated) a death-rate of 1·033 per cent. Assuming that the bulk of these deaths were due to the treatment—which he (Dr. Barron) did not admit—he would prefer the treatment with a 1 per cent. risk to the 18 or 20 per cent. risk before the inauguration of the Pasteur treatment.—Professor BOYCE showed Lantern Studies of Rabbits in the various stages of Paralytic Rabies; also slides of the Stomach and Central Nervous System with the Pathological Changes met with in Rabies.—Dr. GLYNN said that Dr. Harris had put the question, "Is there such a disease as hydrophobia?" In our day there could be no difficulty in answering this question in the affirmative, owing to the comparative frequency of rabies. He recollected, however, that when he was a student a physician to St. Bartholomew's Hospital doubted whether such a disease existed, and so rare was the disease in London in former days that Dr. Watson, in his System of Medicine, stated that he had only met with three cases. In Liverpool in recent years Dr. Glynn had seen at least ten cases. It was remarkable that mild cases of rabies were never met with; the individual bitten by the "mad dog" either escaped altogether or died from rabies. It was desirable in all cases that the wounds of the victims of dog bites should be thoroughly cauterised. It was possible that this treatment might lessen the extent of the infection and render the success of the Pasteur treatment more certain.—Dr. ROBERTSON (medical officer of St. Helens) said that rabies was a well-defined infectious disease, and he believed that if proper precautions were taken to enforce efficient muzzling over large enough areas the disease could be eradicated. The law was at present defective, in that it left its administration in the hands of local authorities. The muzzling order should emanate from a central authority.—Mr. Barr, Dr. Buchanan, Dr. Carter, Dr. Knowles, and Mr. Roocroft also took part in the discussion.

SHEFFIELD MEDICO-CHIRURGICAL SOCIETY.

Exhibition of Cases and Specimens.—Plastic Operation for Ectopia Vesicæ.—Antrectomy for Persistent Suppuration of the Middle Ear and its Complications.

A MEETING of this society was held on Nov. 8th, the President, Mr. MAKEIG JONES (Wath), being in the chair.

Mr. SNELL showed a case of Chancre on the Inner Surface (Cul-de-Sac) of the Lower Eyelid. He also introduced a woman with Ophthalmoplegia Externa of the Left Eye and Palsy of the Right External Rectus; and a boy with Right Congenital Ptosis and Palsy of the Elevators. A curious feature of this case was that when the right eye was fixed the left went up under the eyelid. Vision of the right eye was good; that of the left very defective.—Mr. DALE JAMES showed a child aged two years and a half the subject of Xanthoma Multiplex Congenitalis. The interest of the case lies in the undoubted congenital character of the lesion and in the fact that several of the plaques, especially those in the scalp, had undergone atrophy.—Dr. T. H. MORTON (Brightside) read the notes and showed photographs of a case of Bell's Paralysis in a millwright seventy-five years old, with a history of rheumatism.—Mr. RICHARD FAVELL exhibited a Dermoid Cyst, with hair and a nipple-like process on the skin lining the internal surface; also a specimen of Glandular Proliferating Cystic Disease of the Ovary, weighing nearly 10 lb.—Mr. MAKEIG JONES showed a Large Stone removed by the Supra-pubic Operation.

Mr. COOMBE read notes of a case of Plastic Operation for Ectopia Vesicæ. The subject was a female ten years old. A sound covering firmly united was secured by the skin from the sides being first dissected up for a sufficient distance and then united in the middle line, the raw surface being towards the bladder. Drainage of urine whilst union was taking place formed the chief difficulty, but was ultimately provided for by an instrument specially designed for the purpose. The case terminated fatally a few days after the wound had completely healed. Both kidneys were found to be degenerated and the pelves and ureters dilated and blocked by numerous small stones and masses of cretaceous-looking phosphatic material.

Mr. PYE-SMITH read a paper on Antrectomy for Persistent Suppuration of the Middle Ear and its Complications. He showed four cases and gave the results of five others. There had been no fatality among the uncomplicated cases. The otorrhœa had existed for from six to twenty-one years; it was cured after the operation in four cases, diminished in four others, and unaffected in one. Hearing was improved in five cases, deteriorated in two, and unaffected in two. The general health was improved in eight of the nine cases. He maintained—(1) that the chief cause of the chronicity and intractability of suppurative disease of the middle ear is generally the involvement of the antrum; (2) that the implicated antrum is the usual channel for the extension of septic inflammation to the brain, cerebellum, meninges, and lateral sinus; (3) that antrectomy is therefore indicated both for intractable otorrhœa and as a first step in operations for the various encephalic complications of middle-ear disease; (4) that the operation is free from any great risk to life, and offers the best-known means of curing most cases of chronic otorrhœa and of preventing its dangerous complications, and that it also forms the first essential step in the efficient treatment of those complications when they arise.—The President, Dr. Wardrop Griffith (Leeds), Mr. Atkin, Dr. Porter, Mr. Snell, and Dr. Dyson took part in the discussions.

Reviews and Notices of Books.

Difficult Labour: a Guide to its Management, for Students and Practitioners. By G. ERNEST HERMAN, M.B. Lond., F.R.C.P., Senior Obstetric Physician to the London Hospital, Physician to the General Lying-in Hospital, &c. With 162 Illustrations. London: Cassell and Co., Limited. 1894.

DR. HERMAN'S experience as a practitioner and teacher of midwifery and as an examiner in that subject has led him to think that a book was needed which should give more definite guidance in practice than is to be found in the ordinary text-books. The present work is intended to meet that want and to give the student clear information as to the best way of dealing with each complication of labour. In the earlier chapters the difficulties in delivery which depend upon an abnormal position or conformation of the child or children are described. Chapter II., in which an account is given of the abnormalities of uterine action associated with delay in delivery, strikes us as being one of the best in the book. There is no doubt that students have frequently only a confused notion as to the different kinds of uterine inertia. Dr. Herman's account of it is conspicuously clear. First there is *primary* uterine inertia; in these cases the pains are weak or few from the beginning. Then there is *secondary* uterine inertia; here the pains, to begin with, are sharp and frequent, but ineffective, and the uterus becomes exhausted. Finally, there are the cases of *obstructed labour*, where delivery is prevented by some mechanical obstacle; here the uterus ultimately passes into a state of tonic contraction. As the author very properly insists, it is of the greatest practical importance to distinguish between these different classes of cases, and he gives in tabular form the principal points of difference between cases of secondary uterine inertia (or uterine exhaustion) and cases of tonic contraction of the uterus. As to treatment, the great thing to bear in mind is that in cases of uterine exhaustion the patient requires rest, and that immediate delivery is the worst possible practice, as it is almost certain to be followed by serious post-partum hæmorrhage; while, on the other hand, in cases of tonic contraction of the uterus immediate delivery is the proper treatment, for delay may very probably lead to rupture of the uterus. In the chapter on the Diagnosis of Pelvic Contraction Johnson's method of directly measuring the true conjugate is carefully described. It depends on inserting the hand, or parts of it—for instance, the fingers and thumb, four fingers, three fingers, or two fingers—into the

true conjugate, and measuring the breadth of the part of the hand inserted. The measurements, of course, vary considerably in different individuals, and with slight differences in the position of the fingers in the same individual. It has therefore been suggested—and we think it is a simpler plan—to use a ring pessary that will just fit into the contracted conjugate instead of the fingers. The classification given of flattened pelves is a simple and convenient one. The author divides them into three groups:—1. Where a full-time child cannot pass through the pelvis. This includes all cases in which the true conjugate is not more than two inches. 2. Where a full-time child cannot pass *living* through the pelvis. This includes all cases where the conjugate is more than two inches, but less than three. 3. Where it is possible for a living child to pass through the pelvis. This includes cases in which the conjugate is at least three inches. In speaking of the forceps, we gather that Dr. Herman considers the axis traction forceps to be superior to the instrument of the ordinary pattern, but he does not actually recommend it, partly because in nineteen cases out of twenty ordinary forceps do as well, partly on account of the complexity of the instrument, and also because of the continued compression of the head while it is being applied. But continuous compression is not necessary with the axis traction forceps any more than with the ordinary forceps. The screw which regulates the compression need only be screwed up just before each act of traction, and can be released in the intervals of traction so as to take the pressure off the fœtal head. One important advantage of the axis traction forceps is that the instrument is not likely to slip, an advantage that is very noticeable in certain mento-posterior positions of the face. We think that, whatever may ultimately be the case, it is as yet certainly going too far to say that under favourable conditions as to time, place, and operator the risk of Cæsarean section is "not greater than that of an ordinary ovariotomy." There is a very complete account of the treatment required in cases of placenta prævia. The treatment which is here recommended as best for the majority of cases is happily epitomised by the author as "early turning," "slow extraction," and "antiseptics." Dr. Herman does not believe in plugging the uterus with gauze as a remedy for post-partum hæmorrhage. He says: "Any treatment that is largely used in slight cases as a prophylactic will show a great percentage of lives apparently saved, for cases of dangerous hæmorrhage are rare. ..... Death from atonic hæmorrhage has taken place in spite of plugging." For the worst cases, in which nothing will procure tonic contraction, he recommends continuous compression by means of a fist in the vagina and a hand on the abdomen. But does not the same criticism apply to this treatment? Have no cases of atonic hæmorrhage ended fatally in spite of it? Of course, if it is employed in any but the worst cases, where by the hypothesis "nothing will procure tonic contraction" it will meet with success as do other methods of treatment; but it seems to us that when the uterus is not contracted at all it must be exceedingly difficult to compress it effectually; it is hard even to define the outline of the uterus when it is entirely uncontracted. It is agreed on all sides that when cases are properly managed post-partum hæmorrhage is rare, but there certainly appears to us to be evidence that in these rare cases, when no ordinary treatment succeeds, plugging the uterus with iodoform gauze is at least as good as, if not better than, any other remedy that has been suggested. The book is well up to date, and information will be found on the use of Champetier de Ribes' bag for dilating the cervix in cases of accidental hæmorrhage, placenta prævia, and in the induction of labour, as also on the intravenous injection of saline fluid for the collapse after hæmorrhage; and attention is directed to the point that patients may die from exhaustion after the cessation of the hæmorrhage. There is likewise a short account of symphysiotomy, as to which the author says: "Until evidence is before the profession showing that the operation is without remote detrimental effects, and that it can be repeated in the same patient without ill-consequence, I hesitate to recommend its adoption." Considering the large number of successful cases reported from the Continent and from America, to say nothing of cases nearer home, we think we are not mistaken in saying that a good deal of evidence of the kind is already before the profession, and that what we may perhaps call a provisional case for the operation has been already made out. We have briefly referred to some of the points which seem to invite criticism; they are for the most part matters of opinion, on which different authorities, with the same data before them, hold opposite opinions. We consider that Dr. Herman has succeeded in producing an excellent, practical, and at the same time concise, guide to the management of difficult labour that cannot fail to be of much assistance to those for whom it is intended.

Études de Physiologie Artistique, faites au moyen de la Chronophotographie. Par MM. E. J. MAREY, Membre de l'Institut, Professeur au Collège de France, Directeur de la Station Physiologique, et G. DEMENY, Préparateur de la Station Physiologique. Première Série. No. 1: Des Mouvements de l'Homme. Paris: Société d'Éditions Scientifiques. 1893. Prix de chaque album, 4 francs.

THIS interesting publication is the first of a series of albums which are to contain plates reproduced by instantaneous photography of movements of the animal body. The first instalment of six plates represents seventy-four attitudes of man. They are executed with much skill, and will be interesting to students of plastic anatomy, and particularly useful to the artist, who by this means obtains a faithful image of the muscular proportions of the body in various attitudes, so beautifully represented in the works of ancient Greece by the classic sculptors, who had frequent opportunities of observing nude gladiators in their public combats and gymnastic performances.

The problem of animal mechanism has ever engaged the attention of the student. Mr. Muybridge of San Francisco appears to have been the first to bring to the public notice in England the result of studies in which M. Marey in France and himself in America were engaged. In a lecture delivered before the Royal Institution in 1882 on the Attitudes of Animals in Motion, illustrated with the zoopraxiscope, Mr. Muybridge said: "M. Marey, the eminent French *savant*, dissatisfied with the investigations of his predecessors, and being anxious of attaining more minute information than their works offered in the study of animal movements, employed a system of flexible tubes connected at one end with elastic air chambers, which were attached to the shoes of a horse, and at the other end with some mechanism held in the hand of the animal's rider. The alternate compression and expansion of the air in the chambers caused pencils to record upon a revolving cylinder the successive or simultaneous action of each foot as it correspondingly rested upon, or was raised from, the ground. By this original and ingenious method most valuable information was obtained."

The pictures of the present issue refer exclusively to the human frame. Future numbers, also containing six plates each, representing the analyses of a large number of attitudes, will be published in succession, some of them on an enlarged scale.

The Urine in Health and Disease and Urinary Analysis. By D. CAMPBELL BLACK, M.D. London: Baillière, Tindall, and Cox. 1895.

WITHIN recent years the department of urology has so developed as almost to constitute a distinct science, and the works on the subject have become correspondingly numerous. The work now under consideration forms an

exceedingly good compendium on this subject, besides containing no small amount of original observation. The anatomy and physiology of the kidney are first considered, and both sections are treated plainly and concisely. Especially praiseworthy are the tables and epitomes here inserted, and the same remark applies throughout the book; in fact, these tables and summaries are most noteworthy features of the work and facilitate easy and rapid reference. The normal elements of the urine are next described, but only the more important ingredients are treated at any length. Dr. Black's endeavour has evidently been to make the book as practical as possible, and in this he has been eminently successful. He considers that many of the minutiæ of urology are devoid of practical bearing, and that many of the constituents described as existing in the urine may be regarded as the curiosities of the chemist's laboratory, not a few indeed he believes to be manufactured in the so-called processes of isolation. The abnormal constituents of the urine are naturally most carefully and fully considered. The classification of albumens and their characteristics are clearly described. The detection of albumen occupies a considerable amount of space, all the principal methods being given. We would here venture to differ somewhat from the plan adopted by the author of giving all the directions for making the test solutions in the French measures. It is certainly more scientific, perhaps more suitable for the laboratory; but as this work will probably be read by students and practitioners who have always been accustomed to the English notation, we think it would have been preferable to give the English equivalents in grains and ounces, &c. The pathological significance of albumen is not given as clearly as the directions for its detection and intimation; the division of albuminuria into pathological and physiological, meaning by the former structural change in the kidney or blood changes, and by the latter "conditions affecting the circulation of blood in the kidney," such as morbus cordis, &c., is a little confusing. A section on urinary sediments, to be of any value, must be well illustrated. In this department the book is certainly not lacking, for the illustrations are numerous, accurate, and well reproduced, so that much may be learned by merely glancing through the pages and the figures contained in them. We can with confidence recommend the work as a useful textbook and a handy volume of reference.

LIBRARY TABLE.

Transactions of the Ophthalmological Society of the United Kingdom. Vols. XIII. and XIV. Sessions 1892-93 and 1893-94.—The volumes before us represent the chief ophthalmological work done in England in the course of two years. They deal with many different subjects, some of which are of great public interest, and they are illustrated by several beautifully executed chromo-lithographs and by many lithographs and woodcuts. School Ophthalmia, a disease that is interesting to all classes of the community, since it is easily spread by contagion, is discussed with his accustomed care by Mr. Hutchinson, who advocates the formation of hospital schools in which those who exhibit the slightest indications of the disease may be received and educated whilst they obtain appropriate and skilled treatment. It is not impossible that the London County Council may assist ophthalmologists in this matter by setting aside one or more wards in their hospitals or asylums for acute infectious diseases. Amongst the diseases of the cornea reference may be made to a plan adopted by Mr. Anderson Critchett of applying a galvano-cautery at a dull-red heat to the surface in conical cornea, which he states proved successful in his hands. An excellent result in the treatment of the same disease has been obtained by Mr. Silcock by the removal of an elliptical piece of the cornea. Mr. Cowell and Dr. John Griffith record a case of Filamentary Keratitis, and Mr. T. Holmes Spicer gives a good account of Keratomalacia in Children. Cases of Cyst of the Iris are reported by Mr. J. G. Mackinlay, Mr. F. R. Cross, Mr. A. S. Morton, and Mr. Juler; in several of the cases there was no history of injury. Optic Neuritis is the subject of an interesting paper by Dr. James Taylor, which, when read at the Ophthalmological Society, was followed by a good discussion, in which Mr. Horsley, Mr. Ballance, and Dr. Hill Griffith took part. The chief point that came into prominence in this discussion was that there are many factors which may contribute to the production of optic neuritis—that it is probably often associated with basal meningitis, and that it may also be the result of intra-cranial pressure and be relieved or altogether removed by trephining. Mr. Work Dodd deserves credit for having carefully made out the optical conditions existing in fifty apparently normal persons, a line of research that is too much neglected. Mr. G. A. Berry contributes a learned paper on the Relation between Visual Acuity and Visual Efficiency. The Bowman Lecture, which from accidental circumstances has been postponed during the present year, was last year delivered by Mr. Pridgin Teale, who took as his subject the performance of the Operation for the Extraction of Hard Cataract without Iridectomy and advocated that plan with remarkable ability. It remains to be seen whether it will come into general use. Both volumes reflect much credit on the care and assiduity of the secretaries, Dr. Beevor, Mr. Hartridge, and Dr. Habershon.

Smith's Medical Visiting List for 1895. London: Hazell, Watson, and Viney.—This *Visiting List* for 1895 maintains its usual high standard of excellence, and is too well known to require detailed description. The ruling of the pages enables the busy practitioner to enter his engagements with the minimum of trouble and to see at a glance what has been done during his day's visits. There are special sections for obstetric and vaccination engagements and for memoranda of various kinds, and at the beginning there are many pages of most useful data in tabular form. The book is handsomely bound and is a real *multum in parvo*.

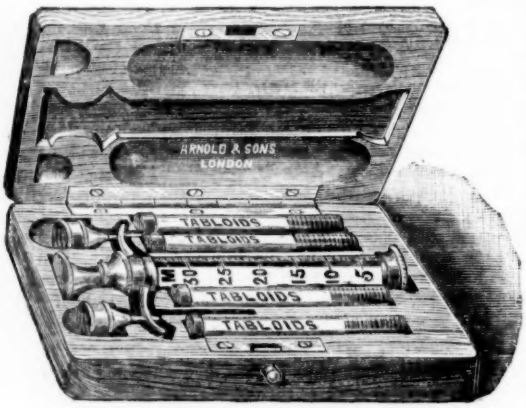
The *Realm*, the new weekly paper, is published at the offices, Hastings House, Norfolk-street, Strand, London. Papers multiply at a rate and in a manner almost to preclude the most observant chronicler of contemporary literature from reporting upon them and placing them in order of merit; but the new threepenny weekly which made its first appearance last week seems to us to merit a word or two. To begin with, it is only 3*d.*, and is clearly intended to cover as much ground as weekly reviews whose orthodox price hitherto has been 6*d.*; in the second place, the articles in the first number are good and useful, as well as excellently written. There are too many young writers among us to whom such papers as "Negligence in Literature" and "The Yellow 'Boom'" should be useful. "Personal Recollections," again, constitute an original and interesting section. It is difficult, however, to believe that any widespread class of readers are likely to be interested in the feeble little social paragraphs.

New Inventions.

A NEW HYPODERMIC SYRINGE.

MESSRS. ARNOLD AND SONS have constructed a hypodermic syringe for me which I consider possesses a combination of advantages not found in any one instrument at present in use. 1. The barrel is lined with a patent white enamel, upon which the numbers, marked in jet black, can be easily read at a glance in the poorest light. 2. The piston-rod is

graduated and fitted with a sliding stop-nut. 3. The numbers run in the contrary direction to that adopted generally, and the advantage of this is very obvious. 4. The valve is a modification of Arnold's patent double oil-valve, in which a perfectly flat leather surface is seen on looking into the barrel. This flat surface impinges against a flat leather washer in the base of the needle, and when these two come in contact every drop of liquid is driven out. 5. The barrel is fitted with two projecting horns by which it can be held steadily between the first and second fingers, leaving the other hand perfectly free to manipulate the skin of the patient. 6. The needles have been manufactured of a new specially tough metal, and will pierce with ease thick pieces of silver without blunting or injuring the point thereof. The skin of the coloured race is proverbially hard, and practitioners in the tropics find the ordinary hypodermic needles



quite inadequate on occasions. 7. The needle screws on over the barrel, allowing a tabloid to be dropped into the cylinder and dissolved in its entirety; or the liquid may be drawn up, if the practitioner prefers, in the ordinary way. 8. The wires for cleansing the needles are fitted with thick rings so as to be easily detected if they fall on the carpet.

I find this combination of the merits of various syringes most useful in Barbadoes, where often the light in a small room is dim and the patient's epidermis very tough.

CUTHBERT BOWEN, M.D.

General Hospital, Barbadoes, W.I.

THE LINK SHELL TRUSS.

WE noticed this truss on Aug. 4th, 1894, and wish to refer our readers to the comments we then made. We regret to say that advertisements of the truss have been issued in which our comments have been incorrectly quoted and additions made thereto not warranted by those comments. We have called upon the maker of the truss to withdraw the advertisements and have received from him the following letter addressed to our Manager:—

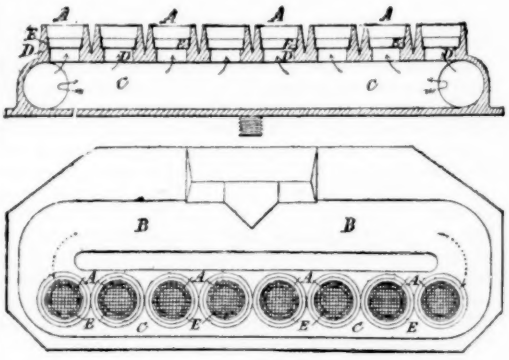
Nov. 19th, 1894.

DEAR SIR,—I will do all I can to correct any misrepresentation that appears in my advertisements from this date. I apologise for having caused you any annoyance in connexion with my truss. I having but started again in business in March last, you must think it a pity to place an hindrance in my way. Yours faithfully, ALBERT HODGE.

P.S.—Kindly let me know if any farther annoyance is caused. I am unable to withdraw the matter from the annuals I have given out, they being in the press.

A NEW "NON-LIGHTING-BACK" BURNER.

WE have already expressed our satisfaction at the evident stimulus which the publication of the Report of "THE LANCET Special Analytical Sanitary Commission on Smoke Prevention and Perfect Combustion (III. Gaseous Fuel, Gas-heating and Gas-cooking Appliances)"[1] has given to the gas stove-making industry in directing the attention of those engaged in it to certain much-needed improvements in the structure of gas stoves and gas appliances. We continue to receive evidence from time to time that this is so, but of the drawbacks which were pointed out the one which appears to have received more attention than others, as indeed it should do, is that of the "lighting back" of the atmospheric or Bunsen burner. The tendency of this burner to "light back" on the slightest provocation is really a drawback of a serious kind peculiar to those stoves which are more closely imitative of the glowing coal fire. In this class of stove, in which clay balls &c. are maintained at a glowing heat, the Bunsen burner is for the present a *sine quâ non*. But frequently the atmospheric flame is easily disturbed, with the result that the mixture of gas and air contained in the burner tube ignites, the flame reaching the small gas inlet at the bottom, where it continues to burn with an inadequate supply of air, so that imperfect and poisonous gaseous products are given off, or else, if they burn, it is with a white flame depositing soot upon the "fuel," and consequently producing but little heating effect. Amongst the devices which have been brought to our notice to overcome this defect, that recently introduced by Messrs. Main and Co. of Glasgow and 11, Carthusian-street, Charterhouse-square, London, is certainly the simplest. It consists in slightly modifying the shape of the burner proper, so that its widest part is at the orifice, *A*, instead of, as with burners hitherto constructed, at the base. At the same time, about halfway down the burner tube there is a narrow gallery or projection, which serves to support a cup-shaped piece of iron gauze. The plan of the burner will be understood by reference to the accompanying illustrations. In the uppermost figure *A* indicates the burners



in which the gauze cup, *D E*, is placed, while *C* represents the chamber of the burner containing the mixture of coal-gas and air effected by the small gas-injecting nozzle. In the lower figure the gauze cups are seen *in situ* at *A E*. The cups simply drop into the burner as into a cone-shaped tube, so that they may be easily taken out and replaced if necessary. The gauze cup is not in contact with the flame, as is the case with other burners in which gauze is employed. Indeed it remains quite cool when the burner is in action, as is shown by the failure of a match-head to light when placed upon it. It is this provision upon which the successful working of the burner appears to depend. In experiments we have made with this burner and with a stove to which it was fitted we found that the tendency to "light back" was reduced to a minimum. Draughts, for example, had no other effect than to blow the flame about, despite which it remained blue and preserved the appearance of an atmospheric flame burning under normal conditions. Even when the gas is turned low the flame exhibits little inclination to run back to the jet at the back of the burner. This is a particularly satisfactory feature, since it allows the gas to be turned low, so as to reduce, when desirable, the heat of the fire without risk of "lighting back." The burner appears also to be freer from the noise of the ordinary atmospheric burner. The gauze cup offers the additional advantage that it protects the burner from being clogged or choked with broken particles of fuel, which may easily be removed. When the cups themselves become faulty through wear, they may be replaced at an obviously very trifling cost. We understand that this improved burner may be readily adapted to existing types of stoves.

[1] THE LANCET, Nov. 25th, 1893.

THE LANCET.

LONDON: SATURDAY, NOVEMBER 24, 1894.

THE address which Professor CROOKSHANK recently gave before the Medical Society of King's College on the Prevention of Small-pox, which will be found in this issue, cannot fail to arouse interest, not unmingled with astonishment, at the extraordinary attitude which he thought fit to assume upon this most important question of the day, before an audience mainly, we imagine, composed of medical students. We would by no means wish it to be understood that in his main thesis—that, namely, of the great importance of sanitary regulations in checking the spread of small-pox—there is any difference between the general body of the profession and himself. Such rules and regulations lie at the very foundation of the whole question of the prevention of infectious disease in general, and small-pox is not excluded from that category. Nor do we doubt that if it were practically possible to enforce these measures with the utmost rigidity, not only small-pox but all infectious disease would be in a fair way towards entire suppression. It is, however, just because in the world as it exists at present and in the fallibility of humanity there are elements which render it absolutely impracticable to enforce such measures in their entirety that no one but an enthusiastic dreamer can anticipate the stamping-out of small-pox by such means. It is because in vaccination there is an aid of great power and influence, readily applied and of proved efficiency, to ignore which would be worse than folly, and because to replace it by measures which, whatever may be said, are certain to be imperfect, that we do most strongly deprecate the advice of Professor CROOKSHANK which he urged on the attention of the Society.

For if the medical profession in general, and those who have studied small-pox at close quarters in particular, are convinced that vaccination protects from small-pox and mitigates its severity, that opinion and experience must counterbalance all the reasoning which Professor CROOKSHANK has in his memorable work adduced to show that the sources of vaccine in the present day are too varied to fit in with the hypothesis that vaccination can be in any way antagonistic to variola. He dismisses it in this address with scarcely veiled contempt, "apart," he says, "from the question whether vaccination affords a transient immunity [from small-pox] or is of no more value than 'issues' to protect against the plague," and he absolutely shuts his eyes to the experiences of a century. He complains that in the current text-books no mention is made of prophylactic measures other than vaccination; but it may well be replied to him that in his address to students on this important topic he chose to dismiss with scant ceremony the evidence in its favour. Are we never to have an impartial judgment on this question? The opponents of vaccination, who claim Professor CROOKSHANK as their leader (or at any rate one out of the small band of scientific men who have found salvation in the eyes of the Anti-vaccination League), do not spare themselves in aspersing the medical profession for holding fast to the truth that is forced on us by experience. We are accused of prejudice, blind adhesion to authority, sordid love of gain, and every conceivable meanness because we uphold the truth of the principle which JENNER brought to light. It is not surprising, surely, that the intemperate language, distorted facts, and absurd hypotheses that are so often advanced by the anti-vaccinationists (whose action, it may be granted, is in good faith) should be met by strong remonstrance and angry rejoinder from those who can appreciate the issues that are at stake and the ignorant blindness with which these are disregarded. We have waited long for the Report of the Royal Commission, but we fully realise the amount of labour which this Commission has gone through. We are not of those who think that it would be better if the Commission came to a conclusion without having made a full examination of all sides of the question. The task they have undertaken is one of the hardest that can be set, and their decision, whatever it may be, must command respect. Confident that the claims of vaccination will be really "vindicated," but looking also hopefully to practical recommendations for its better regulation, we are not inclined to join in the cry that is raised in many quarters against the delay in the issue of the report. We may deprecate the long continuance of the state of uncertainty and the pretext it affords for a suspension of the law at the hands of anti-vaccinationist boards of guardians; but, lamentable as this is, it would be more lamentable still were the Commission over which Lord HERSCHELL and Sir JAMES PAGET have so ably presided to bring their labours to a conclusion without having thoroughly considered the subject on all sides.

Let us now turn to Professor CROOKSHANK'S address, which, he was careful to point out, embodied the recommendations which he made to the Royal Commission. As many of our readers may not have the opportunity or leisure to peruse his voluminous evidence, they and he may be grateful to find his views compressed within a few paragraphs. Indeed, they are neither recondite nor profound. Nothing strikes us so much as their simplicity and—if truth must out—as their lack of originality. Professor CROOKSHANK himself would fain have us believe that, after all, he is only reviving the suggestions of HAYGARTH; but we cannot help thinking that, save for some insignificant detail, the plan of HAYGARTH has been in operation in this country for some years past. For is it not a fact recognised by all that the greatest progress with regard to, and the greatest triumphs that have been secured over, infectious diseases are to be found in the wider knowledge gained of their etiology and of the application of such knowledge to their prevention. No one, we venture to think, recognises this more fully than Professor CROOKSHANK himself. His interesting account of the conditions favouring the spread of plague, and the "sterilising" of London, as he pithily put it, by the Great Fire, led up to his attempted analogy with small-pox—an analogy which, he will pardon us for saying, is somewhat strained. It is, we know, a stock argument that small-pox has declined in consequence of the progress of sanitation alone; and yet in the same breath those who maintain this argument claim that recurring epidemics of small-pox show

the futility of vaccination as a remedy. Perhaps they would venture to say to what pitch of perfection sanitation must attain so that small-pox may be banished like the plague. It is puerile to lay such stress on this side of the question; for, in the first place, it is not true that insanitary conditions have any special relationship to the occurrence of small-pox, although in the general sense it is, of course, obvious that overcrowding, uncleanliness, and imperfect ventilation favour its dissemination when it finds a foothold in a community living under such unhygienic conditions; and secondly, as to the argument that it is spread by vagrants, those who think they see in this undoubted fact proof that it is generated by dirt seem to ignore the fact that the common lodging-house, shelter, and casual ward are eminently fitted for the distribution of a contagious disorder, the characters of which are often so slight as to lead it to be overlooked, and the infectivity of which is not limited to the eruption stage. But Professor CROOKSHANK would introduce the most rigid measures of compulsory notification under heavy penalties, of compulsory isolation and quarantine, and, if possible, an international system of mutual notification, with the view of "stamping out" small-pox as effectually as cattle plague has been stamped out. The *naïveté* of these suggestions could hardly be enhanced had he added the one essential feature of the "stamping out" of animal plagues, a method which could hardly be introduced in a Christian country. Seriously, however, we have no hesitation in saying that his recommendations (or shall we say HAYGARTH'S?) can never be enforced because they are not practicable. It would be impossible to secure the notification of every case of small-pox; it would be impossible to avoid infection however promptly compulsory isolation might be carried out; and it would be impossible to interfere with the commerce of nations to the extent that it would have to be interfered with. Professor CROOKSHANK'S scheme is Utopian, and were he in a position to see it enforced to-morrow he would find it break down at every step. In saying this we do not deny that if carried out to the full, at the cost of individual liberty (and of life) so long as the disease remained on the face of the earth, it might and possibly would be effectual. We do not believe, any more than he does, in the spontaneous generation of small-pox, and therefore we think that in a more perfect state of civilisation it would be possible to exterminate it by this means. But we have to deal with things as they are, and we unhesitatingly, if reluctantly, condemn his well-meant suggestions as beyond the bounds of practical endeavour.

The State may well pause before taking such advice as this, which has been proffered as an alternative to compulsory vaccination; for say what he will as to the prevalence of small-pox in spite of vaccination laws—and it is somewhat lamentable to find a scientific man taking up the parrot-cry of the anti-vaccinationist in respect to the outbreak in 1887-88 in "well-vaccinated Sheffield"—the experience of Sheffield, as of Leicester, and, indeed, of any place, "well vaccinated" or not, during outbreaks of small-pox has been uniformly the same. True, we may have learnt—and there is no want of faith in the admission—that vaccination does not secure us perfect immunity, as JENNER believed, but the invariable experience has been a vastly disproportionate fatality of the disease upon the unvaccinated as compared with the vaccinated, and a very marked difference also amongst the various classes and ages of the vaccinated. Professor CROOKSHANK and his followers may choose to ignore these facts, may deride statistics and scoff at "marks," but if ever there was a question upon which statistics can afford a just basis of comparison it is this one. And from the extent to which the figures have now accumulated in all countries they are large enough to eliminate sources of error due to the operation of other factors. The strength of the opposition to compulsory vaccination is not to be found in the statistics of small-pox, but in the allegation that the operation is itself not free from danger. How slight that danger is, having regard to the extent to which vaccination is practised, and how the risks might be obviated by stringent observation of the ordinary rules of surgical procedure and care in the selection of the subjects, are facts which must be known to Professor CROOKSHANK as well as to anyone. Were the compulsory law to be repealed forthwith, the medical profession would be failing in their duty did they not impress on the community the lessons which every small-pox outbreak teaches. It is because they know as none others can know what an attack of small-pox really means to the unfortunate person who contracts the disease, and because they know as none others can know what is the value of vaccination in mitigating the severity of the disease, that they would feel bound to advocate its adoption by every parent in the case of, and for the sake of, his children. It is in the attitude that he has assumed with regard to vaccination, and the encouragement he has given to its neglect, that we blame Professor CROOKSHANK; whilst, at the same time, we consider his scheme for stamping out the disease—not excluding his recommendation to revert to variolation of those attending the sick—to be delusive and practically far less efficacious than the practice which he ignores and despises.

THE address on the "Channels of Infection in Tuberculosis," delivered by Dr. G. SIMS WOODHEAD before the North London Medico-Chirurgical Society at its opening meeting, which we published in THE LANCET of Oct. 27th, deserves the careful attention of every member of the profession. It constitutes an instructive and suggestive compendium of the present state and drift of our knowledge on one of the most momentous subjects that can engage the attention of medical men, whether engaged in pathological research or in one or other of the different branches of medical practice. While Dr. WOODHEAD speaks with special authority from the standpoint of recent research and discovery, he does so with great moderation and care, and with due respect to those who have to do battle with the disease in its common and clinical aspects. The discovery of KOCH has completely changed the whole aspect of this chapter in pathology and medicine, and Dr. WOODHEAD'S address deals with some of the most practical bearings of the new discovery which are more apt to be overlooked.

His main objects are to show the importance of the glandular system in the resistance to or transmission of

the disease and to magnify the importance of two avenues of the tubercle bacillus which are apt to be overlooked. As he says, the risk of inhaling it in the dust of rooms, especially rooms occupied by tuberculous patients, is obvious. This is dinned into our ears, and the risk will provide for itself. Even before the discovery of the bacillus it had been practically anticipated and in some degree obviated by the introduction of fresh air into close rooms and the general hygienic improvement of workshops and sleeping apartments, with enormously beneficial consequences to large classes of the community. There is still, however, much to be done in the way of guarding the most obvious avenues, the respiratory passages. Dr. WOODHEAD does not overlook the occurrence of infection of the lungs through the inhalation of tuberculous material in the form of dried sputa or particles of dust with tubercle bacilli attached, but admits that it accounts for a large number of cases of phthisis. He directs attention none the less to other channels, and gives good reasons for thinking that even where the pulmonary lesions are most apparent they have been secondary to others induced at comparatively distant points. The two points to which he specially directs attention as those at which the battle with the tubercle bacillus has to be fought are—first, the tonsils and the adenoid tissue of their neighbourhood; and, secondly, the adenoid tissue of the intestine and the mesenteric glands. It will not surprise practitioners of medicine to learn that careful research points to the tonsils and the adenoid tissue about them as organs of great importance in the fight with the tubercle bacillus. If these lymphoid structures are healthy, and the cells of which they consist are active, they are able to give a good account of any tubercle bacilli in ordinary quantities which they may encounter. But if, on the contrary, they are unhealthy or clogged with secretions, if the cells are inactive, and if the bacilli are thrown on them in great numbers, they succumb, and, instead of destroying the bacilli, become food for them and cease to interrupt the progress of infection from gland to gland, until at last it may reach the glands at the root of the lung, which are almost invariably found to be affected before the lung itself. We are apt to think lightly of the tonsils, save when they are inflamed, when they often give rise to a degree of pyrexia and constitutional disturbance altogether disproportionate to their size. But a careful study of the address and of the description of the lymphoid tissue surrounding the entrance to the larynx, and of a similar ring surrounding the entrance to the pharynx, leaves the impression that these structures have most important powers of resistance to micro-organisms which, supplied in the food or in the air, abound in the mouth and fauces, and which, apart from the action of the saliva and of the cells of the lymphoid tissue, would be very disastrous in their effect. These include such deadly agents as the organisms of septic pneumonia and the tubercle bacillus. Though the tonsils and the neighbouring lymphoid tissue generally make a good resistance to such organisms, it often happens that they become abraded, or ulcerated and disorganised, and give too easy a passage to them. This has been demonstrated in the case of pigs, in which animals veterinary surgeons have long been familiar with a tendency to swellings, often leading to abscesses, at the angle of the jaw. These abscesses have been shown to be tuberculous, and in many cases the tonsil itself is the seat of tubercle. In others, while the tonsils were to the naked eye unaffected, they have been unable to offer the resistance to the passage of the bacillus which is one of the functions of the part. The coarse feeding of the pig is supposed to make it vulnerable in these structures. Dr. WOODHEAD is satisfied that he has seen in children tuberculous invasion of the lungs through the tonsil and the cervical and thoracic glands, and that it is of much more frequent occurrence than is supposed, though not so frequent as invasion through the intestinal and mesenteric avenues. With regard to this method of infection, he declares that he has seen dozens of cases of children where the lungs were markedly affected, but where it was possible to trace the course of invasion from caseous or old mesenteric glands through the chain of retro-peritoneal glands, up through the diaphragm, to the posterior mediastinal and bronchial glands, and so on to the lung. He believes that such infection through the intestine can only take place from food, and especially milk, though occasionally imperfectly cooked meat may be the medium.

To us the gist of Dr. WOODHEAD'S address seems to be that henceforth, without neglecting the factor, we shall have to think less of heredity in this matter, and more of personal and public hygiene. He only does justice to the old physicians in crediting them with having discovered that the chief hope of resistance to tubercle is in those agents which raise the tone of the body and its glandular tissues. On measures calculated so to act, and on the exclusion of gross quantities of the tubercle bacillus from the air we breathe and the food we take and which we give our children, we must for the present rely for victory over this great curse of nations, both civilised and savage. Medical science may yet discover a specific for tuberculosis, like that of quinine for ague; meantime it is giving the State much material for action and for legislation in the protection of the people.

WE publish in another column the reply of the honorary medical staff of the Great Northern Central Hospital to the memorial of some 200 practitioners of the neighbourhood deprecating the scheme lately advertised by which the staff is to undertake the gratuitous treatment of patients who can pay for private wards. This answer has been somewhat long delayed, and we cannot say that it makes up for its tardy appearance by its strength. We shall be surprised if those who have protested against the arrangement are satisfied with the reply of the staff, though it is couched in the most courteous and conciliatory terms. We understand that the practitioners who signed the protest will be called together next week to consider the letter of the staff. While we trust that the controversy will be conducted with the good tone and temper which have so far characterised it, we may express a wish that the general practitioners of North London will defend the principle at stake, and insist on honorary staffs restricting their gratuitous services to the really or the practically poor. In this matter, departing from all precedents in the profession—they actually boast of the newness of their principles—the medical staff have become parties to the provision of certain

accommodation for twenty or thirty patients who can pay, in an institution which in the view of ninety-nine out of every hundred of its supporters was meant to be a charitable hospital for the poor; and they have undertaken to treat such patients gratuitously.

This, we have maintained throughout, is an injustice to the poor, who cannot find sufficient accommodation in the wards set apart for them in the hospital. It is also an injustice to the medical profession, which has suffered as no other calling has from the extension of the gratuitous principle. If this innovation is permitted to pass without a serious protest a grievous abuse will receive a wide extension, and the demoralisation of the public as regards its obligations to medical men a new sanction. This injustice to the profession is often spoken of as if it affected only the general practitioner. No doubt he is the chief sufferer, but the injury to him is only less than to the class of young consultants, especially in surgery. This is a large and ever growing class with every year's progress of science. It is a class which has achieved great distinction for surgery in recent years, and one of which we are justly proud. This class is seriously injured by the extension to another large section of the community of the gratuitous principle. If there is a large part of the community which cannot pay the recognised fees for operations and for nursing, so also are there many medical men and nurses who should be able to meet their cases on terms of arrangement not demoralising to the paying patient. There are two or three hospital homes in the north of London which amply meet such cases as are made the excuse for the new departure, and the staff of the Great Northern Central Hospital cannot be allowed to act as if they had only themselves and their own particular hospital to consider. Their action affects their own order; but it affects still more widely the general practitioners with whom they are to enter into new competition, giving their services on gratuitous terms. In the opinion of the most experienced and thoughtful members of the profession they should not have entered into such an arrangement; they should have declined to be parties to a scheme for still further endangering the fair reputation of our hospitals as charitable institutions for those who cannot pay, and who are properly to be treated "without money and without price."

The gratuitous terms of our general hospitals have been much abused. In a purely charitable institution the sense of shame acts as a check on persons who might otherwise be tempted to misuse charitable endowments. But this check is removed when a commercial principle is introduced and the advice of consultants is given for nothing. Hospitals after all should only be refuges for those whose homes and whose means are inadequate to the treatment of their cases. The charitable public has enough to do to find accommodation for these. All whose position in life is superior to this should stay at home or find accommodation in hospital homes established on a commercial basis, and the existence of such homes in North London makes the new departure inexcusable.

MEDICAL MAGISTRATE.—Mr. J. Home-Hay, M.D. Edin., has been appointed a magistrate for the Burgh of Alloa.

Annotations.

"Ne quid nimis."

THE ROYAL MEDICAL BENEVOLENT COLLEGE.

WE have heard from Dr. Holman, whose energy and unceasing interest in the Royal Medical Benevolent College, its offshoots, appanages, and developments are well known to all our readers, the method in which recent increases in the funds of the institution have been applied. It will be remembered that almost exactly a year ago the governors of Epsom College authorised an application to Parliament for a Bill to vary and extend some of the provisions of the Act at that time in force. One of the principal new powers asked for was to abolish the almshouses at Epsom, but without prejudice to the rights of existing resident pensioners. This power was obtained some six months later, and at the biennial festival dinner we handed a cheque for £1000 to Dr. Holman, the treasurer, to be the nucleus of a fund for the purpose of enabling the council to grant increased pensions in lieu of residences. We learn that the present number of pensioners resident at Epsom has now been reduced to eleven and these poor old folk cling to their little homes and decline to leave them. To do so is not only within their rights, but so natural that we cannot but sympathise with the feeling which impels them to object to change. The one underlying notion of a haven of rest must be that the shelter should be permanent and that the sheltered should not be called upon to change his abode, and this restful principle has been recognised. As, moreover, the average age of the eleven pensioners who have elected to remain at Epsom is seventy-six, their period of tenure in the nature of things cannot now extend over many years. The treasurer informs us that a portion of our donation has now been utilised by raising certain of the pensions to £30, a proceeding with which we are entirely in accord, feeling that a gift is no gift at all when unduly hedged about with conditions, and that by as much as a donation can be made productive of immediate good and comfort by so much are its best purposes served. We understand that no more admissions to the asylum can now take place under the new Act, and consider that the scheme proposed by Dr. Holman of raising the existing pensions of all in turn from £21 to £30, giving precedence to the seniors, is the kindest and most practical method of assisting the pensioners.

WHAT'S IN A NAME?

THE developments of modern chemistry and the growth of synthetic compounds call continually for the multiplication of proper names. If the names are to indicate the composition they become polysyllabic and ponderous. To the chemist who is fond of tracing the relationship to other compounds such names may be a source of pleasure, but the busy practitioner is apt to shudder whenever he meets with the ominous words, "its chemical composition may be expressed by the name of ....."; and he metaphorically takes a deep breath before attempting to proceed in one expiratory effort. So well is this recognised that names for new drugs are commonly made up out of physiological or pathological terms; sometimes with the happy result of coining an applicable term which shall endure; sometimes, however, hastily bestowing a title to which subsequent experience shows that the drug has no claim. So long as the name does not hamper progress perhaps little harm is done, although there is some inconvenience in having to bear in mind that, though the name promises the possession of certain physiological or therapeutic properties, the drug should only be used for some totally different purposes. Notwithstanding such difficulties, it

should always be easy to coin new names which do not appear to be obvious imitations of names already used and generally recognised; such imitations are apt to cause confusion and even to be a source of danger. From an advertisement we note the introduction of a new synthetic compound which is described as an antipyretic, antitoxic, antineuralgic, and anti-rheumatic; it is stated to strengthen the heart's action; and because it is intended for treating diseases in which "toxæmia" is liable to be encountered it is to be called "antitoxine"—a name which (without the final "e") has already been appropriated, and is in these days in everyone's mind. The final "e" has already given trouble enough in Anglicising the official names of alkaloids, and it may still be questioned whether the distinction conveyed by its use has yet been fully recognised. Even when pronounced quickly little difference can be detected between antitoxin and antitoxine, hence, as these two have nothing in common but the name, it is obvious that the similarity must prove a snare and a pitfall from which the profession and the public should be protected, and we hope to learn shortly that the newcomer has gracefully withdrawn from a title to which another holds a prior claim.

THE CHINESE AND THEIR WOUNDED.

THAT war is or is not a necessity of civilisation and progress is a question upon which arguments have by no means been exhausted; but while war exists the humanitarian has a right to demand that the suffering which it necessarily entails shall be reduced to as small a degree as possible. This is a sentiment which is shared by every nation with the smallest pretension to be called civilised; but the Chinese during the progress of the present war with Japan do not seem to have had any such feeling towards the wounded. And to make the matter sentimentally, if not morally, worse, it is their own wounded who have been in question. From Pekin comes the story that after the naval battle at Port Arthur a telegram was sent to Tientsin for a surgeon, and a medical man at once volunteered to go if he were equipped with the necessary medical stores and surgical instruments. This demand the authorities refused to accede to, and the wounded were consequently neglected. It is also stated that the Chinese warships are very inadequately supplied with medical and surgical stores, a matter in which the contrast between China and Japan is very marked.

WORKHOUSE FORMALITIES.

IT is clearly impossible that any social mechanism of widely extended usefulness can be capable of exact adaptation to the convenience of individuals. Certainly no such elasticity can be expected in our Poor-law system. Nevertheless, it is advisable that the most should be made of such adaptation where this is rational and possible, and especially if necessity and not mere convenience presses for its exercise. This patent fact, as we may judge from a recent instance, is apt to be overlooked at times, whether from inadvertence or other causes, by the executive agents of our administrative machinery. A fortnight ago a pauper died in Croydon Infirmary under distressing circumstances. The poor man, a lodger, being ill, had applied for admittance on the previous day, and had been furnished by the relieving officer and the parochial surgeon with the requisite papers. On his presenting these, through a deputy, for final supervision to the former official, however, an objection was raised on the ground of his non-attendance in person. He was compelled, therefore, with much difficulty and in bad weather, to attend a second time, and after much delay, which did not end even within the gates of the workhouse, he found a resting place for the night and a prospect of medical attendance—which he received the next day about three hours before he died. It is much to be regretted that the important fact that this man suffered from irregular action of the heart, doubtless associated with cardiac incompetence, was at first either unobserved or did not suggest by symptoms of obvious urgency the necessity for immediate and more watchful attention. We fail to see, moreover, why, under any circumstances, his earlier and easier admission should not have been possible. Having once been seen and certified by the relieving officer and his medical chief, there was no occasion for him again to visit the former. It was admitted at the inquest that the required order might be issued to a messenger from the patient. Indeed, it is customary in like cases for a second visit, if needful, to be made by the relieving officer himself. This arrangement would certainly have been preferable, and the patient's admission might then have been accomplished by means of the parish ambulance—undoubtedly the best method in the circumstances. It was likewise unfortunate that earlier notice was not taken of the condition of a newly admitted inmate. Whether the pursuance of these merciful measures would have greatly affected the issue in his case we cannot say.

TYPHOID FEVER AT NEWPORT.

THE course of events at Newport in the Isle of Wight is we regret to say, the reverse of satisfactory. The prevalence of typhoid fever continues, and we learn that attacks have also occurred in Carisbrooke, in Parkhurst Barracks and Prison, and in some other localities. This incidence of the disease adds further force to the suspicion that it is the public water service that has given rise to the epidemic; for where the water goes, whether within or without the borough boundary, there the fever has appeared. On the other hand, whatever effect any faulty sewers in Newport may have in promoting extension of the disease, this effect must necessarily be limited to the sewer area, and cannot account for extensions of the disease which are altogether beyond that area. It is reported that Mr. Baldwin Latham has been asked by the corporation to visit Newport and to advise as to its wells. His well-known views as to the danger to which chalk wells are liable by reason of soakage of filth from cesspools, &c., are, if acted on in this case, likely to have an important influence on the future of the Newport supply, quite irrespectively of the immediate cause of this long-sustained fever prevalence. In the meantime, we would strongly urge that all water should continue to be boiled before being used for domestic purposes, and having regard to the use of water in connexion with what has been aptly termed "dairy purposes," and which includes the washing of cans, &c., we feel certain that the boiling of milk should be carried out equally with the boiling of potable water.

THE RECENT FLOODS.

WE trust the various sanitary authorities concerned are fully awake to the necessity of taking very energetic and exceptional measures to mitigate the dangers likely to arise from the recent serious floods. Unfortunately, in the thickly populated districts which have suffered there are other evils to cope with besides the water. Even London is not altogether safe from the after-effects of the floods, for we cannot say to what extent they may in the Thames Valley have contributed to pollute the water-supply. There is potential though not very great danger, we venture to think, under the circumstances, from the large number of carcases of animals which have been drowned and which are being conveyed here and there by the swollen stream. We must, however, view the flooding and overflow of sewers with much greater apprehension. When yards and streets are under water the sewage in cesspools and sewers is brought to the surface, is conveyed by the floods into the cellars

and lower rooms of inhabited houses, and also reaches the watercourses, lakes, &c. from which the various supplies of drinking water are derived. The sanitary authorities cannot prevent this; but special care may be devoted to the filtering of the water-supplies. Moreover, as soon as the waters have subsided, the sewers must be very carefully overhauled, and defects and injuries remedied. Equally urgent is the purification of dwellings, and the cleansing of the walls, which in some cases will be found impregnated with sewage. The medical officers of health, the sanitary inspectors, and the borough surveyors will have an enormous amount of work to perform, and we would suggest that in some cases outside help should be procured. It will be greatly to the credit of any district affected if, after a severe flood, it can show that the death-rate has not notably increased.

UNSOUND MEAT.

THE offence of exposing unsound meat for sale as human food is one of rather frequent occurrence, if we may judge by the reports of cases brought before police magistrates in different parts of the country. As a rule convictions are readily obtained, because the evidence given by those who are in a position to judge of the condition of the meat is accepted as reliable and conclusive. But in some instances the culprit escapes, notwithstanding the weight of evidence brought against him, and this because the magistrates sometimes take peculiar views of what constitutes unsound or diseased flesh, or consider they are better judges in this matter than professional experts whose business it is to inspect such food. In other instances their decisions are inexplicable. For example, in a prosecution instituted by the corporation of a town in the North, and heard a few days ago, the case was dismissed, the evidence of the seller of the unsound meat and others interested on the same side being accepted, and that of the medical officer of health of the borough and the inspector being rejected. What renders this case altogether exceptional, however, is the decision given in one which immediately followed. In this case another butcher was prosecuted for exposing unsound meat for sale, and a portion of it was a joint from the same animal which furnished the piece that formed the subject for prosecution in the first instance. The same evidence was given on both sides, but here the bench imposed a fine of 40*s.*, with 8*s.* costs, or in default fourteen days' imprisonment. We think in the first case something must surely have been omitted from the report.

POST-MORTEM PARTURITION.

A REMARKABLE case illustrative of this very rare occurrence is reported in the *Derbyshire Times* of Oct. 30th as having happened at Chesterfield. A single woman aged twenty, who, as the event proved, was pregnant and nearly or perhaps quite at term, was seized with puerperal convulsions, and died undelivered. Apparently the fact of her pregnancy was unknown to those who were living in the house with her, and, indeed, the succession of fits seems to have given rise for a time to some suspicion of strychnine poisoning, a suspicion which subsequently was shown to be altogether without foundation. Now comes the remarkable part of the case. Two women who laid out the body in the customary manner swore most positively that when they did so there was no sign of a child to be seen, nor any signs that would have led them to suppose the dead woman had been recently confined. It was decided to hold an inquest; and Dr. Green received the coroner's order to make a post-mortem examination. When he lifted the sheet which covered the body he found the body of a fœtus, at or near full time, beside the woman's body, and still remaining in connexion with the placenta and uterus. There was an inversion of the uterus; there was also enormous distension of the abdomen. The woman had died on a Thursday morning, and the post-mortem examination was held on the Saturday afternoon, two days after the death. It might have been supposed that for some reasons of their own the women who laid out the body had determined to conceal the fact that there was a child's body there at the time as well as the mother's; but there seems no reason to doubt that they were speaking the truth, as, although the occurrence of parturition after death is exceedingly rare, still a sufficient number of cases is recorded to place the possibility of its occurrence beyond dispute. Thus, in a paper read by the late Dr. Aveling before the Obstetrical Society of London, forty-four such cases are referred to, and some particulars are given of thirty of these cases. The rarity of the occurrence, however, is shown by the fact that twenty-three of the thirty cases have had to be sought for in records previous to the beginning of the present century. The first of those recorded as having happened since 1800 is reported in *Bell's Weekly Messenger* of Sept. 26th, 1802, No. 337, and as it is in some respects similar to the recent case at Chesterfield we quote it:—"The wife of a gamekeeper near Reigate, a girl of fifteen years old, being with child, and hourly in expectation of being brought to bed, was seized on Sunday morning last with convulsion fits, in which dreadful situation she remained till the Monday morning following, when she died. The fourth day after her decease the child was born perfect, but dead." It appears to be very generally agreed that the motive power which so causes expulsion of the child after death of the mother is the expansive force produced within the abdomen by the generation of gases in the process of rapid putrefaction. It is a curious fact that many of the accidents of ordinary labour may also occur in labour happening post mortem, such as spontaneous evolution of the fœtus, and prolapsus, inversion, and rupture of the uterus. As Dr. Taylor puts it in the Guy's Hospital Reports for 1864: "There are probably some medical practitioners who, from not having heard of such cases, would not hesitate to deny the possibility of their occurrence. It is to them that cases of this description convey a serious warning."

MEDICAL ATTENDANCE ON THE POOR.

A VERY pitiable case was disclosed at an inquest held on Nov. 15th at the Whitechapel Infirmary, which must recur unless a principle or a system for its prevention can be devised. A poor woman, only nineteen years of age, was admitted to the infirmary in what Mr. Herbert Larder described as a most shocking condition, and died in a week. She was suffering from blood poisoning and peritonitis, set up by want of proper attention at childbirth. It would seem that she was a single woman, living with a newsvendor in Dorset-street, and had given birth to a still-born child nearly a month before. A medical man, according to the *Times* report, was called in, but when he saw the nature of the case he refused to do anything. The parish medical officer's *locum tenens* also refused his help save on the condition of a fee or an official order from the relieving officer. Strange to say, twenty days went by without other aid than that of a "handy woman," and the young woman was then taken in the state described above to the infirmary, where, under the good care of Mr. Herbert Larder, she survived nearly a week. As usual in such cases, the discredit fell on the profession. The coroner said he was aware that the parish medical officer was within his legal rights in refusing to attend without an order, but he thought that "the doctor, for the sake of humanity, ought" to have gone to the case. We will not conceal our regret that neither of the medical men went to the rescue of this unfortunate woman; but how strange it is that the coroner's argument from humanity was

applied only to the medical men. Where was the humanity of the newsvendor who allowed twenty days to elapse without getting an order for a medical man? This appeal to humanity is too exclusively addressed to medical men. What is society about to leave such cases to the sole care of the medical profession? Society has carried this habit too far—even to its own demoralisation,—and when a tragedy like this happens it relieves its mind, through the coroner, by throwing the blame on the medical man. This is rather a hard addition to all the wrongs inflicted by society on the profession. It is time it should cease, and that boards of guardians, or some larger authority, had power to adopt the coroner's suggestion that the necessitous poor should be allowed to call in the nearest medical man in cases of urgency, the medical attendant being paid out of the rates for his first visit (or as many as may be necessary to place the patient under the Poor-law medical officer). Such a system is actually in force under the Poplar board of guardians, for which they deserve credit, and the clerk of the Whitechapel guardians promised to commend it to his board.

PRESENTATION TO MR. RIVINGTON.

IT was determined some time ago, as our readers are aware, by the friends and former pupils of Mr. Rivington to make the occasion of his retirement from the active service of the London Hospital an opportunity for presenting him with some substantial testimonial of their regard. A complimentary dinner was accordingly given to Mr. Rivington on the 15th inst. at the Criterion Restaurant, at which a handsome silver tea and coffee service, which was the form taken by the testimonial, was presented to him. About eighty gentlemen attended the dinner, and Mr. Hutchinson, F.R.S., occupied the chair. Among those present were Dr. Robert Barnes, Dr. Stephen Mackenzie, Dr. Herman, Dr. Woakes, Mr. Barrett, Dr. Lewers, Mr. Openshaw, Dr. Hewitt, Dr. A. J. Richardson (Brighton), Mr. Best (Dover), Dr. Giddings (Beckenham), Mr. Bowkett, Mr. Brownfield, Dr. Haslip, Mr. Peskett, Dr. Ward, Mr. Reilly, Dr. Sequeira, and Mr. George C. W. Wright, who had acted as secretary in organising the proceedings. The chairman proposed Mr. Rivington's health in appreciative terms, and in the course of his speech referred to the fact that when he himself was appointed assistant surgeon to the London Hospital Mr. Rivington was his first house surgeon. The toast was enthusiastically received. Mr. Rivington, who was evidently touched at his cordial reception, thanked those who had attended the dinner and subscribed to the testimonial, and also somewhat humorously "those who had judiciously refrained from doing so." Several songs followed the speeches, and a most enjoyable evening was spent.

THE DIFFUSION OF SMALL-POX.

THE metropolis seems to have now practically got rid of small-pox, the records of last week showing only 3 fresh cases, without a single death; while the preceding week only saw 11 attacks, with 1 death. The 51 patients remaining under treatment in the several institutions in London on the 10th inst. further fell to 42 last Saturday. In the four preceding weeks, ended with the 3rd inst., there were in all only 37 notified attacks from small-pox in the whole of London, the only district reaching double figures being Marylebone (12), Paddington having 6 and St. Pancras 5. Thus, although it would be rash to predict anything like constancy at the present season of the year, we may at least congratulate the metropolis in having at length reduced the small-pox records to a fraction of their bulk for some time past. In the suburbs only a few isolated cases of the disease have been heard of in the last two weeks. In the provinces the chief centres of news continue to be Birmingham and Liverpool, though both places happily showed improvement last week. The former town had last week 20 attacks and 2 deaths in place of 4 deaths and 50 attacks in the preceding week, whilst the latter number of cases was in its turn a falling off from the 70 of the previous week. Dr. Alfred Hill, the health officer, has reported that during the September quarter of this year there were 305 cases notified in the city, against 116 in the corresponding three months of 1893. In the latter part of the quarter the disease showed a disposition to increase, and we have recently witnessed a continuance of this disposition. Three wards were specially affected by the epidemic, but all the cases were isolated in hospital and the patients' homes disinfected. Inmates of infected houses were prohibited from attending school, and vaccination was urged. Of the 305 patients, 263 were found to have been vaccinated, the percentage of death in these being, up to the end of the quarter, 2·3; whilst 31 were unvaccinated, the mortality being in them 35·5 per cent. of attacks; and 11 cases were in persons whose vaccination was doubtful. Several cases arose in the last two weeks in Smethwick. Northward, Manchester and Salford were free; and, indeed, in the latter town there were but seven cases last quarter, all being isolated, one death resulting. But in Liverpool nearly a score of attacks are reported to have occurred in the last two weeks. Yorkshire and the northern counties seem to have been exceptionally free. In Scotland during last quarter there were 15 small-pox deaths in the large towns—namely, 11 in Edinburgh, 3 in Leith, and 1 in Greenock. In October in the same towns there were 3 deaths, all in Edinburgh. In the week ended with Nov. 3rd there was a sudden outburst in that city, as many as 50 attacks coming to light in the nine days Oct. 28th to Nov. 5th, though matters have since shown improvement. But these events have led to great activity in the way of hospital provision of a temporary character and to the isolation of many persons. In Dublin there were in hospital at the close of the fourth week of last month 79 small-pox patients, and in the first week of this present month the new cases admitted numbered 28, the discharges being 23, the deaths 1, and the number of patients left in isolation 83. The Dublin journals bear testimony to the scare created in that city by the recrudescent small-pox; but it is pleasing to learn that the authorities on either side of the Liffey are working hand in hand for the most effective and speedy prevention of the spread of the disease. In England generally the deaths from small-pox last quarter were much below those of the preceding two quarters, having been 164 against 308 and 268 in the March and June quarters respectively. Of the 164 deaths, London is credited with 43, Birmingham with 20, and Willenhall with 27. The mortality represented an annual rate of 0·02 per 1000 throughout the whole country, and 0·03 in the 33 great towns.

THE LATE CZAR.

THE remains of the Czar have been deposited at St. Petersburg in the tomb under the cathedral of St. Peter and St. Paul, and the grave has closed over Alexander III. with funeral ceremonies that have surpassed in magnificence anything ever before seen in Russia, or probably anywhere else. Members of our own Royal Family occupied a conspicuous position in the great gathering of mourning royalties, and probably none were more sincere in their expressions of affectionate condolence and sympathy with the new Czar, his widowed mother, and other members of the Imperial family than the Prince and Princess of Wales and the Duke of York. We venture to hope that the fatigue of a long journey and the depressing circumstances to which the Princess of Wales has necessarily been exposed

may have no subsequent prejudicial effect; and as regards the Prince we may join in the national wish that his presence at St. Petersburg may aid in bringing about the international blessing of an amicable understanding between Russia and this country. But we desire, before finally dismissing the subject of the late Czar's fatal illness, to say a few words regarding the late Emperor's physician, Dr. Zacharin, who has addressed a letter to the *Moscow Gazette* setting forth his description and views of the late Czar's illness. We were never able to understand the grounds on which any exception was taken to Dr. Zacharin's professional management of the case, and the account which he has now published of the medical history of his late illustrious patient seems to us to prove how entirely baseless and unfounded all adverse allegations have been. The account which Dr. Zacharin gives of the late Czar's state of health generally and of the slow and gradual development of the symptoms of the malady at the beginning of the illness, with their reappearance in a more pronounced form in August last, is a perfectly clear and consistent one. It appears that Dr. Zacharin did not attend the Czar from the end of January till August, when Dr. Hirsch wrote to mention the reappearance of nephritic symptoms. The nature and probable cause of the disease were diagnosed by Dr. Zacharin, and subsequently verified by Dr. Leyden and other physicians, as well as by the results of the post-mortem examination, and there was no truth whatever in any rumours to the effect that bleeding or any lowering treatment had been pursued. The advice that was given and the recommendations that were made under the circumstances in the Czar's case, so far as they have been made known, appear to have been wise and sagacious in every way, and we feel confident that everything that could have been done was done to diagnose the nature and to avert the fatal issue of the late Czar's illness.

INDICANURIA IN INFANTILE TUBERCULOSIS.

THE present state of our knowledge on the subject of indicanuria in relation to infantile tuberculosis is well reviewed in *L'Union Médicale* of Oct. 23rd. Several observers have at different times studied the subject and obtained varying results. Thus Hochsinger in 1890, from his experiments, came to the conclusion that the presence of indican is constant in the urine of children who are the subjects of tuberculosis. He found indican present in a larger or smaller amount in all his cases; it bore no relation to the stage of the disease or the state of nourishment or age of the child, or whether gastro-intestinal troubles were present or absent. In 1892 Kahane brought forward new facts confirming the results obtained by Hochsinger. Jonk of Amsterdam, however, in 1893, from his investigations disagreed with the above observers, and maintained that indicanuria was frequently absent in tuberculosis, and that, therefore, as a diagnostic sign it was worthless. Steffen[1] gives his figures as follows. He made 1200 examinations of urine from nineteen children of the ages of eighteen months to fifteen years, who were suffering from various forms of tuberculosis. He found that indicanuria in these patients occurred in a greater proportion of cases than in measles (1 in 3), but less frequently than in diphtheria (1 in 5), and in typhoid fever (1 in 5). In tuberculous children also the amount varied considerably—one day a large quantity might be found, whilst on the following only a trace might be present. The question has recently been studied in France by Mdlle. Djouritch.[2] The conclusions of this observer agree with that of Hochsinger and Kahane. She finds that indicanuria is constant and permanent in infantile tuberculosis. The quantity of indican present varies considerably at different times, and even from one day to another, but may always be found, and is, therefore, a valuable test in cases of doubtful diagnosis. After trying various tests Mdlle. Djouritch found the following as simple and as trustworthy as any: Equal quantities of urine and hydrochloric acid are agitated with chloroform; the latter takes up the colouring matter, and forms a violet layer floating on the surface of the mixture.

[1] Jahrb. f. Kinderheilk., 1892.

[2] Thèse de Paris, 1893, and Revue Mensuelle des Maladies de l'Enfance. 1894.

RAILWAY AMBULANCE IN AUSTRIA.

THE Austrian railway companies are to be congratulated on the forethought and energy with which they have provided for the possibility of accident. Their system, as recently described by a contemporary, is of its kind as complete as it can well be made. It is similar to that suggested by Professor Annandale and referred to in our issue of Oct. 20th, and includes the employment of a short special train consisting of goods vans adapted to the requirements of medical aid. Two of these vans are made to act as extemporised ambulance waggons, and are equipped with medical and surgical appliances and with light cots for the conveyance of the injured, the rest being used as extra transport waggons. Recently special hospital cars have been constructed and are stationed in readiness for service at convenient points on the lines of traffic. Medical officers and ambulance men in the service of the company are available when called upon to accompany the train which is despatched as a first instalment of succour to the scene of an accident. This method, if less ready in its application than that suggested in our former article, presents as its chief difference and advantage an arrangement for the transport of the injured which could hardly be possible by means of carriages belonging to the wrecked train. In this respect the Austrian system may well serve as a copy to companies in this country, and there should be no great difficulty in devoting certain carriages, at least one very main line of rail, to the purposes of medical relief, and maintaining them in a state of readiness for any possible emergency.

A PECULIAR CASE OF SO-CALLED NEURITIS.

IN a recent number of the *Journal of the American Medical Association* Dr. Harold N. Moyer of Chicago records a case of some interest which he apparently regards as an anomalous one of peripheral neuritis. The patient was a young woman twenty-one years of age, who presented herself complaining of loss of power and wasting in the hands and arms. This had commenced four years before with severe darting pains in the hands and forearms. Loss of power gradually took place, and later the hands and arms were found to be diminished in bulk. As the disease advanced the pain and numbness ceased, being replaced by loss of sensation. When she came under observation there was marked wasting, especially of the thenar and hypothenar eminences and of the interosseous muscles. The forearms also were much wasted, the atrophy being symmetrical. Fibrillary tremors were also present. Above the elbow there was no wasting or loss of motor power, nor were the supinator longus or pronator radii teres involved in the wasting. Sensibility to all forms of stimulation was diminished or lost as high as the middle third of the left arm. Sensibility was similarly involved on the right side, but reached as far as the shoulder, spreading also to a slight extent over the front of the chest on this side. The electrical reactions were altered in different degrees. In the interossei no faradaic reaction could be obtained, but in a few of the muscles it seemed to be increased. Nystagmus was present, the vision was good, and no change was found in the fundi. There was marked exaggeration of the knee-jerk and ankle-clonus was present on both sides. If this is, as Dr. Moyer believes, a case of peripheral neuritis, it is certainly a very anomalous one. Nystagmus, no doubt, does occur in

alcoholic neuritis, but the presence of exaggerated knee-jerk and ankle-clonus would be almost sufficient to negative the possibility of the case being peripheral. It seems much more likely that the disease is a central one of the cord, involving the anterior cornua and the white matter as well, and giving rise to descending degeneration in the pyramidal tracts. New growth in the cervical region of the cord or syringomyelia cannot be excluded, and it is well known that in the latter nystagmus is sometimes present.

A MARTYR NURSE.

THE death of a nursing sister, M. Augustine, occurred on the 14th inst. at the Hospital of Santo Spirito in Rome under most tragic circumstances. She had reported a patient named Romanelli for misbehaviour, and in consequence he had been discharged. The man obtained admission to the hospital on visiting day, and, entering the ward, stabbed the sister, causing injuries from which she died shortly afterwards. The impression in Rome has been very great. The funeral, a public one, was attended by a large number of the religious, political, and municipal authorities, and was a manifestation of the gratitude of the Roman people towards the self-sacrificing sisters of charity.

THE METROPOLITAN POLICE SURGEONS' ASSOCIATION.

THE seventh annual dinner of this association took place at the Criterion Restaurant on Tuesday, the 20th inst., Mr. A. O. Mackellar, President, in the chair. There was a good attendance of members and several guests, amongst whom were some of the coroners of the county. After the usual loyal toasts, "The Navy, Army, and Auxiliary Forces" was proposed by the Chairman and responded to by Viscount St. Vincent. Dr. Forsyth replied to "The Metropolitan Police Surgeons' Association," also proposed by the Chairman; and Mr. Bruce responded to "The Commissioner and Assistant Commissioners of Police," proposed by Mr. Phillips. Mr. Wynn Westcott, Mr. Braxton Hicks, and Professor Smith responded for the guests. The Chairman proposed "The Medical Press," and in doing so acknowledged the uniform support and consideration afforded the association by the Editors of THE LANCET. Mr. W. H. Battle responded. Dr. Yarrow proposed "The Dinner Committee," for the members of which Mr. Spurgin replied. A selection of music was given during the evening, under the direction of Mr. Herbert Schartau, assisted by Mr. Vivian Bennett and Mr. James Brand. Mr. R. Hopkins (campanologist) also played, and gave much pleasure by his skilful performance.

THE NILE RESERVOIRS.

IT will be remembered that some time ago we called attention to the proposed Nile reservoirs, more especially in connexion with two projects—viz., the Wady Rayan scheme for a reservoir not far from Cairo, and the Nubian or Assouan dam project; and that, in order to elucidate and facilitate the description of these proposals, our article was illustrated by an outline map of the Nile and the country in its immediate vicinity.[1] We then said that, while the balance of sanitary advantages seemed, on the whole, to be in favour of the Wady Rayan site, the engineering and financial advantages were, in the opinion of the eminent authorities consulted, in favour of the Assouan site. The latter scheme, however, unfortunately involved the submergence and destruction of the Philæ temples and other Nubian monuments, which would naturally be regarded as an act of Vandalism by all archæologists and travellers. We urged that, whatever might be the final decision as to the site, the sanitary part of the question—viz., the supply of a good potable water for Egypt—should not be lost sight of. No river in the world equals the Nile in geographical and historical interest. Its fertilising mud makes a barren soil "blossom like the rose," and its water is naturally pure and wholesome where man has not stepped in to contaminate and despoil nature of her beneficent provision. We are glad to notice in the *Times* of the 19th inst. that the Ministry of Public Works in Egypt has recognised the force of the reasons urged by many European archæological societies regarding the preservation of the beautiful temples of Philæ, and has submitted a modified scheme for the construction of a dam at Assouan, by which these will be in a great measure protected. There is no doubt about the material benefits which this great engineering work will confer upon the country; we sincerely hope, however, that the Egyptian Government have fully taken into account any sanitary considerations that may be involved in its adoption.

[1] THE LANCET, April 28th, 1894.

DIPHTHERIA IN LONDON.

THE mortality rate recorded from diphtheria in London has for the last two weeks been practically the same, the deaths last week having been 44, or 7 over the corrected average, and 42 in the preceding week. But both these figures are a distinct fall on the 54 in the week ended Nov. 3rd. Last week's deaths included 7 in Camberwell, 4 each in Islington, Bethnal Green, Lambeth, and Battersea, and 3 in Marylebone. The institutions of the Metropolitan Asylums Board contained at the close of last week 544 patients suffering from diphtheria, as against 531, 537, and 548 in the preceding three weeks, and the admissions to hospital last week were 83, as compared with 99 and 97 as preceding weekly numbers. In the outer ring there were 21 deaths from the disease last week, including 8 in West Ham and 4 in Edmonton. During the four weeks ended Nov. 3rd the notified cases of diphtheria in London yielded a weekly average of 240, the average of the deaths being 54; the per case mortality was thus 22·5. In the September quarter of this year the mortality from the disease in England and Wales was at the annual rate of 0·24 per 1000 living, against a decennial average for the ten previous corresponding quarters of 0·16; but in London the rate was 0·59 and in West Ham 0·56, whilst in the home counties of Bedford and Essex the rates were as high as 0·43 and 0·52 respectively.

MATERNAL IMPRESSIONS.

IN a recent number of the *Philadelphia Medical News* Dr. Hubert Work has a paper on this interesting—if somewhat contentious—subject. He gives the result of his inquiries from several men who have had abundant opportunities for forming opinions or receiving impressions in reference to the matter, and the balance of their evidence at least leans to the opinion that maternal impressions certainly do influence the fœtus in utero. He also enumerates several instances which have either come within his own experience or which have been related to him by the practitioner in whose experience they did occur, and it must be confessed that there are some very striking coincidences. He then states his conclusions in the form of the following propositions: (1) that both physical and mental defects follow maternal mental impressions with such frequency as to establish the relationship of cause and effect; (2) that these conditions are the result of changes in the blood; (3) that the probability of defects in the fœtus from mental causes is dependent upon the mental habit, or characteristics, or susceptibility of the mother; (4) that maternal anticipation of a defect in the child has, in itself,

no influence in the absence of a strong impression; (5) that the impression need not be lasting to cause defects; (6) that personal maternal injury is no more likely to mark the child than the sight of it in another; and (7) that the defect is not necessarily similar in location or appearance to the object creating the impression, but is likely to be. The apparent constancy of likeness is due to the reporting of such cases only. Among these propositions there are no doubt several which would not receive universal assent.

THE LONDON WATER COMPANIES.

ALTHOUGH little has been heard lately touching the question of the acquirement by the London County Council of the metropolitan water undertakings the subject has not been allowed to lapse, for we learn that notification was published this week of the intention of the Council to apply to Parliament in the ensuing session for Bills authorising them to acquire, by agreement or arbitration, the undertakings of the eight companies supplying water to the metropolis at the present time. We doubt if a larger or more serious question for arbitration or for agreement has ever before been brought before the public, and it is certain that the proceedings will occupy a very considerable time. But not a single proceeding will pass which will not be watched with the keenest interest by all classes, since, of course, the question at issue is of vital concern to the whole community.

SCARLET FEVER IN WREXHAM RURAL DISTRICT.

DR. EDWARD DAVIES, the medical officer of health in the Wrexham rural sanitary district, has reported on a prevalence of scarlet fever in his district during the past month, twenty-five cases having been notified to him, all apparently from Gwerysllt, the schools of which place he has recommended to be closed for one month. The schools at Stansty have been already closed for a similar reason, and the disease in that locality seems to have been got under control, as much use as possible having been made of hospital isolation. But Dr. Davies feels confident that all the cases occurring are not brought to his notice, for the reason that, the attacks being mild, no medical man has been called in, and for the further reason that parents in some instances do not look favourably on the practice of having their children sent to hospital, and accordingly try to conceal mild cases in their homes. Householders would not appear to be aware of the obligation resting upon them to notify all cases of notifiable infectious diseases, and the medical officer of health has suggested the posting of notices warning parents of their responsibility in the matter. It is greatly to be regretted that this question of dual notification is not more impressed on householders, as its general adoption would do much to enable sanitary officers to cope with disease in its early stages, and before any great extension of its spread.

ISOLATION ARRANGEMENTS AT ST. ALBANS.

THE members of the town council of St. Albans have been considering the question of providing hospital isolation for cases of infectious diseases, but the outcome of the discussion is by no means promising. They first heard the report of their medical officer of health, which gave an account of a low death-rate; but as it related to a single quarter, and the borough is but a small one, no material inference can be drawn from the statistics. And yet on the basis of this return some of their number seem to have arrived at two conclusions; first, that the smell from their sewers, though a nuisance, is not injurious to health; and next, that since the town is now so healthy there is no need for the ratepayers to be called upon any longer to incur expense in connexion with a hospital, known as the Sister's Hospital, and to which cases of scarlet fever have been sent. But when they were told by their medical officer of health that means of isolation must be maintained, the argument was reversed, and it was contended that isolation had not tended to prevent extension of disease—or, in other words, to promote healthiness. What it was that had helped to make the town so healthy in their estimation did not appear. It could not be the sewers, and if one councillor is to be believed it was not the isolation of infectious disease. The subject was at last referred to a hospital committee, and we trust it will be settled before the discovery is made that the absence of adequate means for isolating first attacks of fever in a town is one of the certain means of involving that town in risk.

SUBDURAL HÆMORRHAGE.

IN the *Philadelphia Medical News* Dr. Shelton Horsley records a case of this character which occurred in a man aged forty-three years. He had a syphilitic history and had been a hard drinker. One day in August while sitting in a waggon he fell off, striking his left parietal eminence against a kerbstone. The wound was about an inch and a half long, but slight and not extending to the bone. He got up and seems to have had a slight convulsion affecting the left arm. He was then sent home, and at this time he was quite conscious. Half an hour later he suffered from general convulsions, and an hour after this was unconscious, with stertorous breathing. The head and eyes became turned to the left side and there was frequent spasm of the left arm. The patient gradually sank and died. Eight hours after the accident, at the necropsy, the bloodvessels of the cortex were all engorged. There was found to be an irregularly shaped clot on the outer surface of the right temporo-sphenoidal lobe, covering a portion of the outer surfaces of the three temporo-sphenoidal convolutions. There was also a small clot on the anterior portion of the inner surface of the ascending frontal convolution at its upper end. The walls of the bloodvessels were much degenerated and therefore liable to rupture, and it is interesting to know that there was no fracture of bone and that the largest extravasation was found almost diametrically opposite to the point at which the skull had impinged on the kerbstone.

THE LATE OUTBREAK OF BUBONIC PLAGUE AT HONG-KONG.

THE further official correspondence relative to the outbreak of bubonic plague at Hong-Kong, which has been published and presented to Parliament, does not add much to the information that has been already laid before the readers of THE LANCET. The correspondence mainly consists of reports, telegraphic and otherwise, from Sir William Robinson to the Marquess of Ripon giving an account of the epidemic, which gave rise to a total mortality of 2560 in the colony from the beginning of May to August last. The Governor of Hong-Kong adverts to the extraordinary energy and efficiency of the permanent sanitary committee, in conjunction with Dr. Lowson, Surgeon Penny, R.N., and Surgeon-Major James, and to the vigorous practical action taken by the military and naval services. There is no doubt that it was mainly owing to these measures that the epidemic did not assume larger and more disastrous proportions. As might have been expected, however, they were not undertaken without giving rise to much obloquy and meeting with great opposition from the Chinese quarter of the colony; but it is difficult to believe that, after our having occupied and governed Hong-Kong for upwards of fifty years, any resident Chinamen should have been found capable of giving credence to the monstrously ridiculous stories that were circulated attributing ghastly cruelties to the English medical men and others. The Chinese are not the only people in the world who loathe cleanliness and sanitation

in any shape or form. The collapse of China in the present war shows what a stationary, unimprovable nation it is. The Governor of Hong-Kong alludes to the numerous theories that exist as to the origin of the plague, which at first he thought was introduced into Hong-Kong from Canton, but about the truth of that view further and later information leads him to speak less definitely. The outbreak, so far as trade and commerce are concerned, was without doubt a very great calamity to the colony. As our readers have already been made acquainted with all the facts and observations regarding the bacteriology of the disease there is no need to enter upon that subject, but we may add that Sir William Robinson encloses some communications respecting it in his despatches to the Colonial Office.

DIPHTHERIA IN SOMERSETSHIRE.

FOR some little time now cases of diphtheria have occurred in the rural district of Wellington, in Somerset, the village of Hadley having been especially invaded, and the schools having, as a consequence, been closed for several weeks past. The sanitary advisers of the authority attribute the spread of the disease to the defective condition of the offices attached to the schools; whilst it is, on the other hand, held that it is to the general insanitary condition of the locality that the diphtheria is to be credited, and complaint to the Local Government Board is talked of if the sanitary authority do not move in the direction of ameliorating those conditions. The fact, however, remains that since the closure of the schools, day and Sunday, the disease has disappeared; and in any case it would seem desirable that any defects on the scholastic premises should be remedied without delay, whatever may have been their relation to the particular outbreak. At Kynnersley, in the same district, the scholars have been also attacked lately to the number of twelve, with two deaths; and the schools are to be closed there. This relation of schools to the dissemination of diphtheria is becoming more and more accentuated, and is, indeed, pressing itself into a prominence which deserves most serious attention. If bacteriology can only be brought into practical use in the early recognition of suspicious throat maladies in children much will have been achieved. It is undoubtedly the continuance at school of infectious throat cases which does such a vast deal to spread true diphtheria, these unrecognised attacks often bridging over periods of apparently total absence of the graver malady, and still more often leading up to the dissemination of diphtheria by reason of importation of disease which is not looked upon at the time as of a serious nature.

THE Duke of Teck presided on Saturday last at a special meeting of the governors of the Richmond Royal Hospital. It was decided to sanction the spending of certain moneys upon the Princess May's ward for children. His Serene Highness afterwards visited the male ward and addressed some sympathetic words to the occupants.

WE learn that Dr. Frederick William Barry, F.R.S. Edin., and Dr. Theodore Thomson, medical inspectors of the Local Government Board, have recently been called to the Bar.

MR. F. J. GANT has been presented with the diploma of Honorary Fellow of the Medical Society of London at the unanimous instance of the society.

SIR GEORGE BUCHANAN has been appointed Chairman of the Royal Commission on Tuberculosis in succession to Lord Basing, deceased.

SIR JOSEPH FAYRER is announced definitely to retire in January next from his position as medical officer to the India Office.

A VISIT TO PARIS TO INQUIRE INTO THE PRACTICAL TREATMENT OF DIPHTHERIA WITH ANTITOXIN SERUM.

BY JOHN A. TURNER, M.B., D.P.H. EDIN.,
MEDICAL OFFICER OF HEALTH TO THE COMBINED DISTRICTS OF LEICESTER AND RUTLAND.

(*Concluded from p. 1175.*)

I DEALT last week with the preparation of the antitoxin serum at the Pasteur Institute, with the practical method of its administration and the results claimed from the treatment, and gave the clinical notes of five cases treated at the Hôpital des Enfants Malades. I will now deal with the practical side of a point upon which most of the routine treatment is founded, and upon which the extent to which the treatment could be utilised in general practice amongst us in England chiefly depends, viz.:—

The Bacteriological Diagnosis of Diphtheria.

When a false membrane exists a piece is detached with a thin spatula having a flat, diamond-shaped point in the manner already described. When no false membrane exists, or, if existent, cannot be seen, the spatula is introduced into the back of the throat, and any secretion collected there is brought away on the point. If it is not convenient to examine the specimen bacteriologically at once it can be placed in a sterilised test-tube, corked with sterilised cotton-wool, and sent to the laboratory for examination; as, however, the treatment—or, at any rate, the prognosis—is believed to depend largely upon the results of the microscopic investigation, the sooner this is made the better. A piece of the false membrane, if such can be detached, should be held in a pair of forceps and teased out on a slide, dried, and stained; a cover-glass should be placed on and fixed in the usual way, and the specimen examined under the microscope immediately. In some cases so many bacteria exist that it is difficult to differentiate them, but in others there are fewer, and they group themselves so decidedly that with a little practice it is easy to distinguish them. The bacteria associated with the diphtheria bacillus are the coccus of Brisson, the streptococcus, and the staphylococcus, and the greatest stress is laid on the importance of determining the type of bacteria. The presence of the true diphtheria bacillus alone allows of a favourable prognosis; the presence of the streptococcus or staphylococcus makes the prognosis grave and aids in determining the method of treatment with antitoxin serum. The cultivation process applied to the specimens taken from the back of the pharynx &c. and received in the sterilised tubes is very simple. The tubes are placed in an incubator, heated up to 37° C., and allowed to remain there twenty-four hours; after this period the tubes can be taken out, and colonies of the bacteria can be seen with the naked eye in the sterilised serum. A specimen of this cultivation is then placed under the microscope for detection of the different types of bacteria. The sterilised serum used for cultivation purposes can be obtained already prepared.

I have now briefly stated the process in general use in the hospitals in Paris. I have purposely abstained from detail, as my desire has been to indicate the practical ease or difficulty of the antitoxin treatment from the public health point of view, not to dwell upon bacteriological details. I will now endeavour to formulate an opinion as to the value of the antitoxin serum treatment, and here again the programme is not so ambitious as it sounds. What I propose is to state how far what is claimed for the treatment by those now skilled in its practice seemed to me to be personally borne out by facts placed before me, and this brings me to my fifth point.

How far could the Treatment be utilised in General English Practice?

By the aid of the treatment now adopted in the hospitals in Paris we learn first the true nature of the disease from a bacteriological point of view. This is of the highest importance if it immediately shows what treatment is to be pursued, and with what hope of a favourable result. It must then be a logical step marking a decided advance. To me it seemed undoubted that the treatment as dictated by the results of microscopic investigation was consistently successful. Next we come to the possibilities of the treatment as a preventive. Given a case where it is impossible

to remove the child from its home, no hospital being able to be provided by the sanitary authority, and where also it is difficult to ensure isolation—and these cases are far too common in all our villages and rural districts—the routine is now as follows. Such obvious precautions against spreading of infection as can be taken are insisted upon, printed instructions are given to the parents, disinfectants are supplied, the children of the house are prevented from attending school, the sanitary inpector and the medical officer of health visit the house, and the existence of the disease is reported to the local authority. These precautions have hitherto had little or no effect in preventing the spread of an epidemic of diphtheria. To me it is proved, by the results I have witnessed, that antitoxin serum has an effect in checking the disease. It seems also to be equally proved to me that the injection of a small dose of antitoxin serum into the system of a healthy child is harmless. It subjects the child to no risk. My deduction is that, when a child is suffering from diphtheria in a house from which it cannot be removed and where it cannot be perfectly isolated, the inoculation of all the household might be a preventive. The treatment cannot do harm, and it might be the means of preventing the spread of the disease. The fluid is absorbed in a few minutes, no abrasion of the skin or swelling or eruption follows, and five minutes afterwards the child is laughing and playing or taking food. I saw several patients who had undergone tracheotomy and been injected with 10 or 20 c.c. of antitoxin very shortly afterwards; they were enjoying their suppers, and the process of injection, to say the least of it, could not have added to their discomforts.

The Supply of Antitoxin Serum.

I have already briefly detailed the method of the manufacture of the serum, and the fact that the supply is nearly or quite exhausted is also well known. The question of how to procure a supply and of the possible responsibility of the Government in the matter ought to be touched upon. The Local Government Board do not intend, I believe, at all events at present, to provide the remedy, although it is understood that the President has under his immediate consideration the alarming prevalence of diphtheria and the question of how far modern methods of research could be utilised in its recognition and prevention. It would be contrary to the position which has always been assumed by the Public Health Department of the State to take part in the supply of antitoxin serum. Our Government might be persuaded to lend a more encouraging hand to medical research. In most countries of Europe the laboratories which have been provided by public subscriptions have been aided by the Government; in this country only is research left entirely to private enterprise. It can hardly be wondered at that we occasionally fall behind in original and scientific research.

The antitoxin serum might be placed in the hands of medical men in such a condition of preservation and in such quantities that it could be used both preventively and curatively; but the general practitioner will certainly not deem it his duty to inoculate generally with an expensive remedy unless he is aided financially by the local authority.

The Precautions to be taken in its Use.

It will become the duty of every medical man to acquaint himself with the microscopic methods necessary to distinguish the different types of bacteria, for if treatment of diphtheria by antitoxin serum is to be adopted in general practice every precaution must be taken in using it. The treatment is not a piece of haphazard squirting, but an accurate chemico-physiological process. The serum supplied must be from a reliable source, and this can only be ensured by legislation on the subject. I have briefly instanced the methods adopted in typical cases of diphtheria in a special hospital. There is no doubt that better results will be obtained where the patient has every advantage that can be derived from good nursing and due medicament; but it is conceivable that these advantages may be counteracted somewhat by the spreading from one case in the ward to another of a more severe form of the disease.

The model arrangement would, of course, be that all cases of pure diphtheria should be treated in one ward; that all those cases wherein other bacteria than the pure diphtheria bacillus are discovered to be present should be placed in a second; that all cases of "croup" (pure) which have undergone tracheotomy should be placed in a third; and that all cases of "croup" where microscopic investigation has detected associated bacilli should be relegated to a fourth ward. The sanitary conditions of the hospital, its cubic space, ventilation, and warming arrangements, all count for a great deal.

From what I have seen of the curative treatment in the hospitals of Paris by antitoxin serum I believe it to be far ahead of any previous treatment. In some cases the results appeared to me to be magical; in practically hopeless conditions the repeated injections seemed to battle with the poison, the result depending on the constitutional recuperative powers of the patient. Death generally resulted from cardiac paralysis or renal troubles; when the case was a lingering one, if death occurred it was generally due to pulmonary complications and broncho-pneumonia.

The important points in the treatment are held to be two-fold: (1) to inject the antitoxin serum in as early a stage as possible; and (2) to use the diagnosis by bacteriological examination, to discriminate the type of case to be dealt with and so decide upon the routine treatment. With regard to the treatment up to the present I here give the statistics of Behring and Kossel:—Behring and Kossel: 30 cases, with a mortality of 20 per 100. Ehrlich, Kossel, and Wassermann: 67 cases with tracheotomy, with a mortality of 44·9 per 100; 153 cases without tracheotomy, with a mortality of 23·6 per 100. Kartz: 128 cases, with a mortality of 13·2 per 100. Weilger: 63 cases, with a mortality of 28 per 100. Aronson: 192 cases, with a mortality of 13 per 100. Roux: 448 cases, with a mortality of 24·3 per 100. This gives a total of 1081 cases treated, with a mortality of 24 per 100.

As a result of my visit I would respectfully urge on my medical brethren the advisability of obtaining for Sir Joseph Lister's appeal the widest publicity and most generous support.

THE PAY SYSTEM AND THE GREAT NORTHERN CENTRAL HOSPITAL.

WE have received the following letter signed by the two senior members of the honorary staff of the Great Northern Central Hospital. It constitutes the reply of the staff to the recent protest made by the general practitioners in the neighbourhood of the institution against the introduction of the pay system into the hospital. We deal with the letter, whose courtesy of expression is admirable, in a leading article.

COPY OF A LETTER

Addressed to the Chairman of a Committee appointed by 201 Medical Practitioners in North London

By the

MEDICAL STAFF OF THE GREAT NORTHERN CENTRAL HOSPITAL.

DEAR SIR,—We desire to acknowledge on the part of our colleagues your courtesy in submitting to the medical staff of the hospital a copy of the protest recently addressed to the Committee of Management. The reply given by the chairman of that committee to the deputation on Oct. 19th ult. will already have made it clear that some sections of the protest were drawn up without a full knowledge of the circumstances attending the establishment of pay wards at the Great Northern Central Hospital. In order that no misapprehension may remain as to the facts of the case, we have been asked by our colleagues to explain them once more, and especially from the point of view of the medical staff.

It must be clearly understood that the demand for pay wards came entirely from the supporters of a proposed new hospital in North London in the year 1883, and that the idea was warmly advocated at that time by several medical practitioners in the district. It was one of the conditions of the establishment of the hospital that there should be pay wards in the future, and the then medical staff of the old Great Northern Hospital in the Caledonian-road was appointed to the new hospital on that understanding. But this innovation was considered so hazardous that a special meeting of the staff was at once called, and a definite resolution was passed to the effect that the medical staff would refuse to have anything to do with any scheme that might be thereafter proposed which should involve the making of a pecuniary profit by the hospital. It has been frequently stated at meetings of the governors and subscribers, and duly reported in the press, that these pay wards were intended for the reception

of patients a little above the poorest class—in fact, for the very class of patients who are so constantly recommended by medical men for admission into the free wards, although able to contribute towards their maintenance.

So long as admission to the pay wards was to be restricted to such cases the present staff felt that they could not refuse their services, but they stipulated for and obtained the following conditions: (1) that no patient should be admitted without the consent, in writing, of his or her own medical attendant; (2) that the medical staff should have control with the house committee of the admission of such patients. With these safeguards it was hoped that abuse of the pay wards would be almost impossible, and already a large proportion of the applications have been rejected.

It will thus be seen that this system differs entirely from any others which have been hitherto tried. The staff, when asked by the Committee of Management to frame rules for the proposed scheme, was opposed to the adoption of any of the existing methods of working pay wards. They endeavoured, therefore, to devise a new plan, which might, as nearly as possible, fulfil the intentions expressed by the governors in 1883, and which should be without prejudice to the interests of the profession or of the nursing homes in the district. The working of this experiment will be closely watched, and prompt action will be taken by the staff if it can be shown that these interests are endangered. The abolition of the whole system, asked for by the deputation, can only be effected by those who instituted it—viz., the professional and lay governors of the hospital.

We remain, dear Sir, yours faithfully

(Signed on behalf of the whole staff),

ROBERT W. BURNET, Senior Physician.

J. MACREADY, Senior Surgeon.

Great Northern Central Hospital, Nov. 20th, 1894.

THE BARIUM WATERS OF LLANGAMMARCH AND THE THERAPEUTICS OF BARIUM SALTS.

BARIUM is not an entirely novel, although it is certainly an unusual, constituent of natural waters, and especially when it occurs in the form of chloride. It is found in minute quantity in many mineral springs, in combination with carbonic and sulphuric acids. The old and well-known sulphur well at Harrogate is stated to contain barium chloride to the extent of 6·6 grains per gallon. It is probable, however, that, since this water also contains sulphur, the barium is gradually deposited out of the solution as sulphate, on exposure of the water to air. The water must, at any rate, be free from soluble sulphates, inasmuch as barium salts are immediately decomposed and precipitated by them. Chloride of barium has been shown to enter somewhat largely into the composition of certain colliery waters, in which it is generally associated, however, with a large excess of common salt and other chlorides, so that these waters could not be drunk without considerable dilution, although they might probably be useful for the purpose of baths. Thus an analysis of the water from the Redheugh Colliery, Durham, showed the presence of as much as 96 grains of barium chloride, together with 1600 grains of calcium chloride and over 4000 grains of common salt per gallon, while lithium chloride was also present in important quantity. Again, another sample of water obtained from a colliery in the neighbourhood of Sunderland, which exhibits an even stronger saline composition, containing nearly 7000 grains of salt, yielded on analysis nearly 9 grains of barium chloride per gallon, a trace of lithium, and a remarkable quantity of bromine, equivalent to 43 grains of magnesium bromide. Still another instance of the occurrence of barium chloride in waters found in coal-yielding districts, but again associated with excessive quantities of salt, is afforded by the water of the colliery at Park Gate, near Rotherham. It contains over 20 grains of barium chloride per gallon, 4700 grains of common salt, and 29 grains of magnesium bromide. The waters of the foregoing springs, in fact, really consist of strong brine liquor, derived, no doubt, from the beds of rock salt in the immediate vicinity of the colliery shafts. Barium occurs as chloride also in a spring near Shotley Bridge, a small village in Durham, to the extent of nearly 4 grains per gallon, but in this water other saline constituents, especially sodium chloride, are not so abundant, the last-named amounting to 121 grains per gallon. This water, however, which has been used for many years by persons suffering from rheumatism and skin diseases, differs from the rest in being distinctly chalybeate in character, possessing a strong ferruginous taste, and containing over a grain of ferrous carbonate per gallon.

A few weeks ago a sample of water was submitted to us for examination, which was reported to contain barium chloride as a natural constituent. Results so far confirmatory of this statement were obtained in a preliminary analysis; and, in view of the possible therapeutic value of the water on this account, we deemed it worth while to make an inspection of the spring at Llangammarch, Central Wales, from which the sample alluded to was stated to be drawn. Llangammarch is a small village, situated in a charming tract of hilly and well-watered country in Breconshire, in the heart of Wales. About a mile eastward from the village, along a valley through which the picturesque River Irfon flows on its way to join the Wye, are the Llangammarch barium springs, pump-house, and hotel. To the north and east rise the Eppynt Hills (1800 ft.), upon which may be seen the sharp Brecon Beacons; while on the other side, towards the west, the country bears a gentler aspect, though it culminates in a range of hills stretching dimly away to the more rugged heights which border the Welsh coast. The water rises through clefts in the rock situated close by the river, into which it formerly ran to waste. A well has been built upon the rock, and modern machinery has been erected for elevating the water to the baths and to the supplies for drinking purposes. The flow of water is equal to 600 gallons per twenty-four hours. It possesses a peculiar saline taste, is quite neutral to test paper, is very slightly opalescent, and contains practically no carbonic acid in solution. On concentrating the water by boiling it remains clear, and when it has been reduced to about half its bulk a drop of the resulting saline liquor, when placed on a platinum wire in a colourless flame, and viewed with the spectroscope, gives brilliant lines in the spectrum corresponding with the metals barium, calcium, lithium, and sodium. The addition of a few drops of sulphuric acid to the water sufficed to produce a marked turbidity, due to the formation of insoluble barium sulphate, which gradually increased in intensity. To the resulting fluid, freed from the precipitated barium by filtration, ammonium oxalate was added, which yielded a plentiful precipitate of lime salt. Similarly, after the removal of this precipitate, an abundant yield of magnesium phosphate was obtained, on adding sodium phosphate to the clear liquid. The temperature of the freshly drawn water was 10° C., while the external temperature was one degree above that point. There are several springs in the immediate vicinity of the barium well, but not one gave any evidence of barium on testing, though in one case distinct chalybeate properties were found. Such were the indications afforded by a qualitative analysis made on the spot.

A sample of the barium water was next obtained, sealed, and despatched to THE LANCET Laboratory for detailed examination, and the results may be compared with the analysis of the sample first submitted. In the following analyses Sample 1 is the sample obtained by ourselves, and Sample 2 the sample first submitted. The results are expressed in grains per gallon (70,000 grains):—

	No. 1.		No. 2.
Chloride of barium	**6·749**	.....	**6·490**
Chloride of sodium	186·200	.....	185·900
Chloride of calcium	85·160	.....	85·470
Chloride of magnesium	20·100	.....	20·315
Chloride of lithium	0·847	.....	0·910
Chloride of ammonium	0·262	.....	0·262
Alumina and silica	3·340	.....	3·100
Bromine as bromide	Distinct traces	.....	Distinct traces
Total mineral matters ...	302·658	.....	302·447

It is important and interesting to observe that the quantity of barium salt has varied only within very small limits during the last ten years, as in 1883 Dr. Dupré made an analysis, in which he found 6·26 grains of barium chloride per gallon. The amount of chloride of barium may therefore be fairly regarded as constant—a fact which is of especial importance in view of the powerful action of barium salts. Existing as chloride, the barium is in a perfectly stable condition in the Llangammarch waters, since there is no trace, according to

the above analyses, of sulphates or other salts in these waters which would decompose the soluble chloride. There was no evidence of organic impurity, the water exhibiting in this respect (leaving out its mineralised character) a degree of purity for which the waters of the Welsh hills are noteworthy. This is hardly surprising when it is known that the Llangammarch springs are situated in the midst of that well-watered district in Wales from which it is contemplated that a water-supply may be derived for London. In regard to lithium, the spectroscopic reaction was so marked that the estimation of this element was considered important. Subsequently it proved to occur to the extent of nearly one grain per gallon (LiCl), an amount which is superior to that contained in many Continental springs, which are valued in the treatment of disease on this account. In most works on Materia Medica the dose of the crystallised salt barium chloride ($BaCl_2$) is given as from one-half to two grains. According to the above analysis, therefore, a tumblerful of Llangammarch water measuring 10 fl. oz. would contain nearly half a grain of barium chloride (nearly a minimum dose), so that two tumblerfuls of the water would contain a medium dose (nearly a grain), and five tumblerfuls would afford the maximum quantity (two grains). The quantity of barium present therefore renders the internal administration of Llangammarch water quite safe, and no harm could result from drinking the water in reasonably large amounts, since quantities varying from six to forty-eight grains of the pure chloride have been taken, by gradually increasing the dose, without bad effect. These quantities would be represented in from one gallon to eight gallons of the Llangammarch water, so that its ordinary consumption is extremely unlikely to produce serious symptoms of barium poisoning.

The therapeutical properties of barium salts have been little studied, but they appear to act similarly to digitalis and veratrine (hellebore) in producing muscular contraction, contraction of the bloodvessels, and stimulation of the cardiac muscles and of the capillaries. A pharmacological note which appeared in THE LANCET[1] is of interest in this connexion, in which it is suggested that barium salts have not been very generally recognised as really useful therapeutic agents, partly, probably, from a want of knowledge as to their effects both on physiological and pathological conditions. This knowledge, however, was not very long ago extended considerably by a series of valuable investigations conducted by Dr. A. Bary of Dorpat, in which the action of barium salts on animals was studied; while at the same time a list of recorded cases of the therapeutic employment of the drug, or of its accidental effects as a toxic agent in the human subject, was collected. The chief action of barium appears to be on the heart, showing great similarity to digitalis. The chloride in small doses increases the action of the heart muscle, and in large doses sets up peristaltic movements, arresting the heart finally in systole. The arrest caused by muscarine and chloral was brought to an end by using this salt. The blood pressure is greatly increased, and, like pilocarpine, it increases in a marked manner also the secretion of saliva, but only when it is injected into the veins, this activity being immediately checked by atropine.

Dr. Hare has employed barium chloride in cardiac diseases in man, and the results of his investigations are contained in the *Philadelphia Medical News*, 1889, p. 183.[2] At the outset he refers to the observations of Lauder Brunton, Ringer, Kobert, Bary, and others, that barium chloride slows the heart very greatly, steadies its rhythm, and at the same time increases the volume of blood thrown out of the ventricles. He refers also to the observation of Kobert that barium increases the blood pressure, a change which he concludes was brought about by an action on the muscular coats of the bloodvessels. In regard to clinical observations, the first case under Dr. Hare's care was that of a girl aged six years, suffering from rheumatic mitral incompetence. For some months she had suffered from marked dyspnœa at night with shortness of breath during the day, but there had been no dropsy at any time. Dr. Hare ordered half a drachm of a solution of the strength of 1 part of barium to 100 parts of water, to be given three times a day. From the first the condition of the child at night was markedly improved, the dyspnœa was much less, and the patient not so restless. The pulse, which had been 130 per minute, now remained at 80 when quiet, or 100 after exercise; the area of the thrill over the apex was much less diffused than before, and one of the chief evidences of improvement was the absence of that peculiar whirring, tumbling sound so characteristic of such cases, the murmurs becoming well separated from one another and having a much more definite character. The continued use of the barium for over two weeks caused no untoward symptoms in this case, and the patient steadily improved, notwithstanding an attack of mild bronchitis in the meantime. The second case was that of a man aged about thirty-five years, admitted to the German Hospital for acute dilatation of the heart, the result of suddenly lifting a very heavy beer barrel. His pulse was weak and irregular, and he frequently suffered from attacks of pain closely resembling angina pectoris, with a marked expression of anguish. The use of barium chloride in the dose of a teaspoonful of a 1 per cent. solution relieved him markedly, increased the volume and force of the pulse wave, and slowed it to as low a rate as 60 or even 50 per minute. In two cases of functional disorder in men barium chloride brought about a very rapid improvement in the cardiac state. A point worthy of notice is the character of the pulse wave produced. While its volume is increased it does not give that sensation of tenseness to the finger which digitalis does, and the pulse wave seems to be very considerably prolonged, a fact which the sphygmograph also records. This interesting contribution concludes by pointing out that in most works on chemistry barium is stated to be an irritant poison; but to produce such evidence of its presence the dose given must be extremely large and many times greater than any amount useful for practical medicinal purposes. "In barium, therefore, we seem to possess a remarkably cheap, virtually tasteless, and very slightly poisonous drug, which, nevertheless, acts as rapidly as digitalis, and does not disorder the stomach."

In the foregoing cases, of course, the salt employed was chemically prepared, and, so far as was known, chemically pure. It would be interesting to discover what the therapeutical result would be if a natural water containing barium chloride, such as that of Llangammarch, were substituted; for it is the current belief that in many instances the use of a chemically prepared solution, although chemically identical as regards its mineral constituents, is not equal in its curative effects to a naturally mineralised water of equal strength. The use of sea water in the bath, for example, is regarded as possessing a greater efficacy than a solution containing salts corresponding in kind and quantity to those in sea water. At any rate, it is well known that the beneficial effects of a balneotherapeutic course are due to a concomitance of influences. Patients who undergo a course of waters at home or abroad, both for drinking and immersing purposes, are influenced by other factors which are no less important in the treatment. Thus, change in social environment, in occupation, in diet, and the influences of good scenery, tempered climatic conditions, pure air, &c., operate powerfully, *per se*, towards the improvement of both body and mind. Llangammarch is situated, as has already been indicated, in a charming valley, and is sheltered by a perfect horseshoe of hills, which effectually protect it from the northerly and easterly winds, and yet the level of the hotel and pump-house on the slopes of the Eppynt range is 600 feet above sea level. The hills around are beautifully wooded, and the views are charmingly characteristic of Welsh scenery. Ample provision is made both for supplying the water for drinking purposes and for a course of treatment by means of the bath, special heating apparatus having been designed to bring up the water to any required temperature, while when desirable, as in special cases, the water may be made more briny by the addition of common salt. For drinking purposes the water is also aerated.

From the results of the above analyses it would appear that the waters of Llangammarch are well adapted for the administration of barium salts, which, as has been shown, exert therapeutical effects like digitalis, but without its disadvantages. We have been informed that trials have already been made with these natural barium waters, and that distinct benefit has been derived in cases of glandular enlargement, in mitral diseases, and in cases of acute dilatation and functional derangements of the heart. It is probable, therefore, that some valuable therapeutical uses may be found for these interesting waters. The quantity of barium chloride contained in them is safely adjusted for internal administration exactly in the condition in which the water flows from the spring; it need undergo no dilution or alteration whatever, except that of warming when it is desired to be administered in the form of a bath, while the presence of other salts

[1] THE LANCET, June 30th, 1888.
[2] See also Practitioner, June, 1889, p. 447.

in the quantities they occur is not prejudicial to its taste, or its effects—the presence of one of them, lithium chloride, no doubt contributing in some measure to its medicinal value. The existence of natural barium waters so near at hand will doubtless lead to further contributions to our knowledge on the therapeutics of this salt; and the study of its action, which may possibly undergo some advantageous modification by the fact of its natural occurrence in a spring, will be certain to yield results of more than ordinary interest.

THE LANCET Laboratory.

SANITATION AT CONSTANTINOPLE.

(FROM A SPECIAL CORRESPONDENT.)

FORTIFIED by nature against the possibility of attack, and yet accessible on every side to the benefits of commerce, Constantinople may be considered as the most advantageously situated capital of Europe. Commanding from her seven hills the opposite shores of Europe and Asia, and placed in the forty-first degree of latitude, Constantinople stands on a fertile soil, possesses a capacious and secure harbour, and enjoys a healthy and somewhat bracing climate. The sea provides an inexhaustible store of fish, while the land is rich in vineyards, gardens, and harvests. Beauty, safety, and wealth all unite on this favoured spot. Well may it have been chosen as the second capital of the Roman Empire, and have become, at the decline of that great Power, the political capital of the Mahomedan world. To-day, in spite of innumerable vicissitudes, it is still one of the most important towns of Europe, and is intimately connected with Great Britain by extensive commercial relations. In regard to those interests with which we are most concerned—namely, the preservation of public health—the authorities at Constantinople hold the keys of the East; they command the whole organisation of the pilgrimages to Mecca, and without their coöperation nothing can be done to check the dangers, especially in respect to the spread of cholera, that arise from these great gatherings of people coming from all parts of the Old World. There, too, entrenched at Constantinople, is the last stronghold of the partisans of the now almost exploded theories in favour of quarantines; but even these are yielding before the advance of science and civilisation. Dr. Stekoulis, member of the Superior Council of Hygiene of the Ottoman Empire, in the report on cholera at Constantinople which he presented to the International Congress of Hygiene recently held at Budapest, concluded with a resolution stating that maritime quarantines had rendered great services, "but as this system of prophylaxis does not always, according to the topographical position of the country, offer the desired guarantees, it is by the good sanitation of towns, the isolation of the sick, and rigorous disinfection that we must in future seek the true measures of prophylaxis against cholera." This resolution of the Constantinople delegate at once shows the direction in which, even in the East, modern thought is turning, and will serve as the text for my report on the sanitary condition of the Turkish capital. To secure the good sanitation of Constantinople it is necessary to inquire: First, what sanitary authorities exist in that town? Here, as in many other towns—London and Paris, to wit—a complexity of authorities is encountered. The authority best known in Europe is the International Sanitary Commission, which controls the maritime quarantine stations and consists of representatives of the Ottoman Empire and of several European maritime Powers. This authority has the advantage of possessing considerable financial resources, for it levies a tax of 20 para, or a little over a penny, per ton for every ship that enters the port of Constantinople. The Commission was founded in 1832 by the Sultan Mahmûd II, "The Reformer," at the time of the first cholera epidemic. Secondly, there is the Medical Civil Council, meeting at the Imperial Military Faculty of Medicine. The Medical Civil Council is placed under the direction of the General Director of the Civil Medical Affairs of the Empire, and consists of a president, ten or twelve medical men, and two chemists. It serves as a sort of academy for the discussion of non-administrative sanitary, chemical, and medical questions. For instance, it deals with the adulteration of food, with medical or chemical evidences of crime, criticises sanitary schemes or proposed public works, such as the building of sewers, slaughter-houses, &c., and is consulted in the event of disputes arising between medical men. This council has at its disposal a chemical laboratory, which is situated near the new bacteriological laboratory. It inspects pharmacies and seeks to prevent the illegal exercise of medicine. Though it is a civil institution several of its members are military surgeons. It has no machinery, no power, for practically enforcing its views. If anything practical has to be done the Council must persuade the police to take up the matter; but, if the Council has not any executive powers and cannot itself carry into practice anything it approves, it can prevent the carrying out of many things it disapproves. Indeed, the Council has often served as an instrument for providing a decent burial to projects and proposals which had been made and which, with advantage, might have been realised but for the hostile opinion of this august body. Thirdly, some twelve years ago, and as the result of a report drawn up by Mavrayeny Pacha, the chief medical adviser of the Sultan, His Majesty created, under the presidency of the Minister of the Interior, a Superior Council of Public Hygiene, which is composed of members of the Medical Civil Council just described and eight other medical men. It performs about the same work as the former Council, so that these two bodies clash with one another. Fourthly, towards the end of the recent cholera epidemic the Grand Pacha and Prefect of Constantinople established yet another Council, of which he himself became the president. This Council meets at the Prefecture, and is composed of a few medical notabilities from the different communities of the town—namely, Jews, Greeks, Armenians, and others, as well as Turks. Some of the members belong to the other Councils, and there are even some foreign medical men on the Prefecture Council of Hygiene. This Council attends especially to the question of cholera and epidemics generally. Fifth in the list I should mention the Military Sanitary Council, which, however, is purely a military authority. Finally, there is a scientific medical society, which was recognised as being of "public utility" by the Sultan Abdul Mejid during the Crimean War, and was named the Imperial Medical Society. It received a State subvention. It is purely a scientific body, and is sometimes, though now rarely, consulted by the authorities.

Some five years ago Dr. Joseph Zanni, at present chemist to the Sultan and at that time ex-member of the Medical Council, made a proposal or petition urging that all these different and conflicting councils should be amalgamated so as to form one compact body, to which should be added new elements, notably bacteriologists, sanitary engineers and architects, lawyers or public prosecutors, and sanitary inspectors and disinfectors. A council thus composed could be subdivided into committees dealing separately with sanitary police, drainage, food adulteration, disinfection, &c. Of course, a municipal laboratory would be needed, and Dr. Zanni further suggested a sort of Bureau d'Hygiène, which would be open every day and act under the Minister of the Interior, in order to constitute a centre for all information, vital statistics, &c., and a connecting link between all the sanitary services. The necessity of some such union between the various sanitary authorities is obvious, and it is also equally obvious that new sanitary services are much needed. For the last ten years or more the scientific advisers of the Sultan, themselves natives of Turkey, have urged the necessity of organising a staff of disinfectors, of providing disinfecting stoves, and of creating a bacteriological institute. The adoption of a complete system of drainage has been advocated on many occasions. All these demands had, however, been opposed by other native advisers of the Sultan, and even by competent authorities belonging to various administrations. This opposition to the suggested sanitary reforms was due, in a measure, to the natural resistance offered by persons in office to proposals coming from others who were not in office. Then, as the name of M. Pasteur had acquired a world-wide influence, and as the greatest confusion arose when last year cholera broke out at Constantinople, the Sultan, wearied by the conflicting advice of those nearest to his person, resolved to consult M. Pasteur. The eminent French bacteriologist replied that he was not a specialist in respect to cholera. The Sultan, however, insisted, and finally M. Chantemesse of the Pasteur Institute was appointed to proceed to Constantinople to advise the Sultan as to whether cholera really prevailed, and as to the best measures to be taken. M. Chantemesse on arriving last autumn at Constantinople confirmed the opinion of the local medical men as to the presence of real cholera, and

suggested measures similar to those which had already been advocated by medical men resident in the capital. Some of these measures were at once carried out. A bacteriological institution was created and well equipped, but—what was of more immediate and practical importance—M. Mondragon, one of the chiefs of the disinfecting service that is so admirably organised and works so well in Paris, was offered a high salary in order to organise a similar service in Constantinople. Authorisation having been obtained from the Paris municipality, M. Mondragon arrived in the Turkish capital during last October. Nothing existed, and everything had to be created. Nor was this an easy matter. The Turks, by nature fatalists, cannot be easily made to believe in the utility of precautions. Then there is a disastrous tendency to look upon all public employment as a source of income rather than a responsibility that can only be met by hard work. As soon as it was known that a new office was to be created and that public disinfectors were wanted family influences were brought to bear to secure the appointments. Thus some *effendis* were nominated, and these gentlemen were highly indignant when they found that they were expected to carry heavy loads on their backs and convey infected linen or bedding to the disinfecting stove. A good deal of weeding was necessary before an effective staff of disinfectors could be organised and taught their work. This has now been satisfactorily accomplished. Disinfecting stations have been established at Pera, Stamboul, and Scutari. The Geneste and Herscher steam-under-pressure stove is employed. Care is taken to separate, and prevent all communication with, the compartment where the infected articles are introduced and the side where they are taken out. As at Paris, there is proper toilet accommodation for the disinfectors, so that they can change their clothes and take a douche after they have done their work. In a word, this service is satisfactorily organised, and during the first year of its existence 2800 houses have been disinfected. All that can be removed is taken to the stove, while the premises are disinfected by sulphur fumes, and sometimes formaline is used, or a mercurial spray being brought to bear on exposed surfaces. The notification of infectious diseases is not obligatory, but it is a very general practice. As, in addition, there is a special medical man for the purpose of certifying deaths, this functionary orders disinfection whenever he considers that there is anything likely to cause infection.

The marked success attending the establishment of the Bacteriological Institute and the Disinfecting Service in Constantinople is a palpable proof that reforms, followed by progress of the most advanced and scientific type, can be achieved in Turkey. Then there is no doubt that the creation of the Prefectorial Council of Hygiene was an attempt to bring about the much-desired amalgamation of the sanitary services of the capital, and to increase their efficiency by the introduction of foreign elements. The result is far from perfect, but it is a step in the right direction. Nor is this all. Redvan Pacha, the prefect, is a man of very enlightened views. He has always taken an active interest in all that relates to the preservation of public health. Among other useful services he has greatly improved the measures taken for the regulation of prostitution in the European, or Christian, quarters of the town. This is the more remarkable as, after all, it is a subject that does not greatly concern the Turks. Among the Mahomedans there is no prostitution, and consequently there is little or no syphilis; but in the Christian quarters of Constantinople, especially where sailors from all parts of the world congregate, there are a great many Greek, German, and Hungarian prostitutes. All these women are carefully registered and constantly visited in their own houses. When any of them are ascertained to be ill, they are kept in a special Lock Hospital till they are quite cured. Under the auspices of the Prefecture, and, of course, with the sanction and approval of the Sultan, a splendid lying-in and general hospital has been built for Mussulman women. This is known as the Khasseki Hospital, and compares favourably with some of the best hospitals in Western Europe. It is admirably situated on elevated ground, and consists of several one-storeyed pavilions. The floors are from three to four feet above the earth, a free current of air passing under them. Antiseptic principles are observed throughout. The closets are of marble, admirably clean, trapped, and provided with a ten-litre or two-gallon flush. The walls of the operating-rooms are of plate glass, and precautions are taken to render the instruments, furniture &c. aseptic. The lint, the dressings &c. are sterilised before being used. Unfortunately, the plate glass on the walls has been cracked by the recent earthquake, and germs can now lodge in the crevices, but doubtless fresh glass will soon be placed in the damaged parts. There are no angles in the walls, all the corners being rounded off; and, besides the windows on both sides of the wards, the stove pipes serve also as ventilators. The hospital has 200 beds. Some 1200 to 1300 Mahomedan women are received here as in-patients during the course of the year, and the total working expenses amount to about £T.7000 per annum (a Turkish pound=18*s*.). The expenses are borne by the town out of the municipal receipts. Patients are treated gratuitously, but those who can afford it and choose to pay may give 2*s* a day for their board and treatment. Though I visited this hospital and was much interested in, and pleased with, what I saw, it is not my present purpose to describe the hospital accommodation of Constantinople. I only briefly allude to the Khasseki Hospital as another proof of the progressive spirit which, in some instances at least, has been displayed by the Turkish authorities. Turkey is now governed by a ruler who appreciates the need of good sanitation. Some steps in the right direction have been taken, but much more remains to be done. This will be rendered very evident when I give some details concerning the recent cholera epidemic and the present deplorable absence of anything approaching systematic drainage in the town.

(To be continued.)

THE ETIOLOGY OF PALUDISM.

ALTHOUGH intermittent fever has fortunately now almost succumbed to the improved conditions of this country, where it was formerly indigenous, the greatest importance attaches to the valuable discoveries of Dr. Laveran, and his latest contribution to the *Revue Scientifique* will be read with much interest by medical men in many quarters of the globe where malarial fevers prevail. Since the discovery by him in 1880 of hæmatozoal parasites (either in the blood as free bodies or attached to the corpuscles) in malarial fevers both he and others have followed up the matter closely in all quarters of the globe, with the result that the existence of this parasite—the plasmodium malariæ—has been fully demonstrated in all cases. Moreover, it has by some been found both in the water and the soil of unhealthy districts, the former of which may easily convey it from one locality to another; then, if the conditions be favourable to its development, it multiplies exceedingly. For instance, in Africa and elsewhere many of the river valleys become death-traps just after the rainy season, when the floods have washed out from the malarial swamps above myriads of organisms, which are deposited in the débris of decaying vegetation as the waters again subside. The much discussed cause and nature of the fevers so prevalent in Mauritius should be put at rest by the discovery there of this parasite of paludism, which, however, assumes such a number of forms that many observers maintain the existence of several distinct species and endeavour to classify these with different fevers. Thus, Drs. Golgi, Pietro Canalis, Gualdi, Antolisei, and Angelini say there are three distinct species of the paludic hæmatozoa: those of the tertian ague, quartan ague, and intermittent fever. Drs. Grassi and Feletti contend that there are five species: those of the tertian ague, quartan ague, "*fièvres pernicieuses*" (2), and those (which are crescent-shaped) originating the "daily," subperennial, and intermittent fevers at long intervals of apyrexia. Again, Drs. Marchiafava and Bignami think that marsh fevers should be divided into two main groups—fevers predominating in winter and spring (quartan and light tertian) in one group, and the quotidian, the more serious tertian, the subperennial, and "pernicious attacks" in the other. More recently, Dr. Golgi proposes a new division of palustral fevers—those originating by the development of hæmatozoa in the blood, and those developing in the bone-marrow and the spleen. Of these and many others who support the doctrine of plurality of species of the hæmatozoal parasite of paludism, none seem to agree in the most essential points—for instance, according to Dr. Golgi, the distinction between the parasite of the quartan and tertian fever consists in the number of segments of bodies in clusters being greater in the latter than

the former; others find that the character of hæmatozoa is not constant in the blood of the same patient. Those who claim that the parasite of crescentic form is of a different species to that of the spherical shape have little to support them. Other authorities differ amongst themselves as to the classification of the fevers produced by any special class of parasite. On the other hand, we find in the blood of the same patient amœboidal bodies at the first attack of fever, and crescent-shaped hæmatozoa in the case of a relapse, showing that the same parasite changes in form under further development. Dr. Laveran also proves that the same form may be observed both in intermittent and in regular fevers, whilst the same fever often presents in the blood several distinct forms of hæmatozoa. One patient when admitted to hospital showed spherical, a month later crescentic and spherical, and finally amœboidal parasites. Another patient (who contracted the fever at Dahomey) showed hæmatozoal parasites of the crescentic form before the attack of fever developed, and later, when the fits of fever came on regularly, the blood was found to contain spherical bodies, the crescentic form having disappeared. From Michigan, Mexico, Texas, Buenos Ayres, and Rio de Janeiro in the New World, and Mauritius, Batavia, Algeria, Bucharest, Tonkin, and the Soudan in the Old World (to mention only a few places), we have confirmation of the existence of the hæmatozoal parasites wherever malarial fevers are prevalent which present the same characteristics in quarters of the globe most remote from one another. For instance, the Brazilian and Algerian parasites of paludism do not differ, and they also present the same two principal forms—the spherical and crescentic. There is no particular form predominant in the tropics; but the crescentic form is most observed at Madagascar, on the Danube, in Batavia, and in the Soudan. The fact that malarial fevers, in whatever quarter of the globe, yield readily to quinine, and the marked effect produced on the blood by antiperiodic treatment, tend to confirm the opinion that the different forms of the hæmatozoal parasite in paludism mark the stages of its development under different climatic influences and morbid conditions of the blood rather than point to any conclusive evidence of plurality of species.

IS INFANT MORTALITY INCREASING?

THE deputation which recently waited on the Home Secretary on behalf of the Parliamentary Bills Committee of the British Medical Association appears to have convinced him that infant mortality in this country is increasing, as, in his reply to the deputation, he referred to "the increase of infant mortality which has undoubtedly taken place." It may not be without interest to point out that this conclusion appears to be based in great measure upon the infant mortality returns for the year 1893, which was a year exceptionally fatal to infant life owing to the high temperature and abnormally deficient rainfall, resulting in a marked increase of fatal diarrhœa. It need scarcely be stated that infant mortality varies widely from year to year owing to seasonal causes, and that to assume that the excess of infant mortality in such a year as 1893 implies a real increase of the mean death-rate of infants is not less misleading than it would be to proclaim a decrease of infant mortality because the death-rate of infants has been so abnormally low in the equally exceptional year 1894. It is only from the average of successive groups of years that any safe conclusions can be drawn as to the general upward or downward tendency of mortality at any age or from any cause. In England and Wales infant mortality, measured by the proportion of deaths under one year to children born alive, was equal to 154 per 1000 in each of the two decades 1851–60 and 1861–70; the proportion fell to 149 per 1000 in the ten years 1871–80, and further declined to 142 in the more recent decennium 1881–90. It can therefore be confidently asserted that during the thirty years 1861–90 there was a fairly steady decline in the English rate of infant mortality, notwithstanding the constant fluctuations from year to year, owing mainly to variations of summer temperature. It is true that the mean rate of infant mortality in the three years 1891–93 exceeded the mean rate in the ten years 1881–90, but this was mainly due to the exceptional mortality in 1893, and this excess will be to some extent balanced by the almost unprecedentedly low rate in the current year 1894. It is too early in the decennium at present to justify the assertion (notwithstanding the marked excess in 1893) that the decline of English infant mortality which prevailed during the thirty years 1861–90 has ceased and has given place to a recrudescence. In questioning the soundness of Mr. Asquith's assertion of a general increase of infant mortality in England it is unnecessary to demur to the statement of Dr. Read, at the deputation referred to, that the "substitution of artificial food for mother's milk in the rearing of infants is responsible for an enormous increase in the infant mortality of the country." We may presume that in this statement excess rather than increase of infant mortality was really referred to. Few will venture to dispute Dr. Read's assertion, but when he proceeds to attribute this evil to the employment of married women in factories we can but agree with Mr. Asquith in doubting whether any existing statistics warrant the "scientific conclusion" that the supposed increase of infant mortality is to any large extent due to this cause. No constant relation has been established between the rate of infant mortality in different towns and the proportion of married women employed in factories. Indeed, as Mr. Asquith pointed out, some of the towns which show the highest rate of infant mortality cannot be classed as manufacturing towns, or even as towns in which any considerable proportion of women work in factories. We doubt, moreover, whether in relation to infant life factory work is more detrimental than charing or laundry work, which are equally the cause of much of the artificial feeding which undoubtedly conduces to the excess of mortality among infants. Dr. Read's statistics are further inconclusive because, while he attributes the excess of mortality in certain manufacturing towns to the employment of married women in factories, he appears to ignore the fact that the excess in the death-rates at other ages in the same towns is almost as large as it is among infants. This fact points to general sanitary causes, which affect all ages, rather than to the employment of married women as the chief cause of the excess of infant mortality. While, however, we admit and deplore this excess we demur to the assertion of general increase in the rate of infant mortality in England.

CHOLERA.

CURRENT NOTES, COMMENTS, AND CRITICISM.

THE European cholera epidemic, which commenced in 1892, has not as yet by any means ceased. In Russia it is officially announced as still prevailing or as having reappeared in the governments of Baku and Tiflis. The police officials announce that in the town of Tiflis there were 6 cases and 4 deaths from cholera between Oct. 6th and 12th, and bulletins carrying us up to Oct. 27th record an additional 1241 cases and 952 deaths. In Poland there were, between Oct. 17th and 31st, 160 cases and 96 deaths. From Constantinople we learn that recruits from Anatolia have conveyed the disease to Scutari; that it has also invaded certain localities in the vilayet of Hudovindighiar, in Asia Minor; and that it continues to prevail in the vilayet of Adrianople, at a place called Tirnovadjik. Cholera is also still prevalent at a point which has more interest for our own country—namely, in the province of Liège, Belgium. In the month ending Oct. 29th there were 92 cases and 42 deaths, and so far as we can learn the prevalence had not ceased at the latter date. In Morbihan dysentery is said to have prevailed near Saint-Tugdual, in a hamlet known as Herpougant, where 15 cases and 5 deaths occurred. Whatever the precise nature of the disease, it was evidently an infective diarrhœa, for it was conveyed by one of the patients to a place called Talvern, where it led to 3 attacks and 2 deaths. Our correspondent at Vienna informs us of persistent cholera in Galicia.

Cholera in Constantinople.

At the beginning of the month several telegrams were published in the press announcing that there were cases of cholera at Constantinople. We have since made special

inquiries on the subject and have received from Constantinople and from official and authentic sources full explanations of the cause of the occurrence of these rumours. We can at once say that there is no epidemic of cholera at Constantinople. At the end of October some recruits arrived from Anatolia, and among these soldiers five cases of cholera occurred, resulting in three deaths. No sooner were these cases reported than all these recruits, to the number of 402, were ordered to Selimia, on the coast of Asia, and there isolated. Of course, the most vigorous disinfection was enforced; and, according to the last advices, there have been no further cases. It should be noted that there have been no cases of cholera in the town, but only the five imported ones among the recruits. The measures which the authorities enforced appear to have been fully successful, and it may be said that the disease was at once stamped out. The danger that such imported cases present in a town like Constantinople rests in the facility with which the subsoil can be contaminated by cholera dejecta before the existence of the disease is recognised and effective measures are taken. As there is no system of drainage, dejecta readily reach the subsoil and travel in all directions beyond all possible knowledge or control. It is possible to disinfect, to flush, to clear out a water-tight sewer, but it is impossible to disinfect a porous subsoil. In spite of the intelligent and successful measures that have been so promptly taken on this occasion, Constantinople will never be safe till it has a complete and effective system of drainage.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

AT the clinical examination for the Fellowship of the Royal College of Surgeons of England, held on Tuesday, the 20th inst., numerous cases of interest were provided. Among them may be mentioned the following: 1. A woman with well-marked Xanthelasma, exhibiting both the plane and the tuberous varieties; the condition, which had been preceded by jaundice, had first appeared nine months previously. 2. Charcot's Disease of the Ankle in a man aged thirty years; the disease had commenced fourteen months before. 3. A boy aged two years had in the left side of the scrotum, attached to the spermatic cord, a firm mass of the size of a hazel nut; it was not translucent, and it was thought to be probably an enchondroma of the cord. 4. A boy aged four years with Irregular Enlargement of the Ends of the Long Bones, accompanied by bony outgrowths; the anterior extremities of the ribs were also affected. One of the bony masses had been removed from the upper end of the left tibia, but apparently without much permanent benefit. 5. An Aneurysm showing itself on the right side of the neck over the lower portion of the common carotid artery, from which it possibly arose; the patient was a woman forty years old. 6. A large Sarcoma, commencing immediately behind the anterior fold of the axilla, in a girl aged twelve years; it appeared to involve the pectorals, and had been noticed about six months. 7. A primary new Growth of the Cervical Glands in a man about fifty years of age. 8. A case of Congenital Overgrowth of the Lymphatic Tissue of the Leg; the subcutaneous tissue was very thick and flabby. 9. A Mass, probably Tuberculous, on the Spermatic Cord of a young man; it had only been noticed a fortnight; there was no history of syphilis. 10. A case of Aneurysmal Varix of the Right Arm; there was no history of traumatism. 11. A well-marked case of Acromegaly in a man aged forty years. 12. A case of Rupture of the Brachial Plexus on the right side, with much wasting of the arm. The boy had been drawn into some machinery by his right arm getting caught in a pulley strap. The brachial plexus had, in September of this year, been cut down upon just above the clavicle, and the cords of the plexus sutured, but up to the present no improvement had occurred.

Many Fellows of the College were present to inspect the cases; but, unfortunately, it did not seem to be generally recognised that the cases were primarily provided for the candidates, for the quietness so essential to a *viva-voce* examination room was certainly not maintained by the visitors.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Wandsworth Urban Sanitary District.—This district comprises the parishes of Clapham, Putney, Streatham, Tooting, and Wandsworth. The total population is estimated to the middle of 1893 at 168,999. The annexed table gives some interesting information in reference to the population &c. of the several parishes:—

Subdistrict.	Population, 1893.	Percentage of total population.	Number of persons to one acre.	Percentage of total deaths in industrial and other classes.	
				Industrial classes.	Other classes.
Clapham	45,537	27·0	36·9	63·1	36·9
Putney	18,692	11·1	8·6	57·1	42·9
Streatham	47,042	27·8	15·5	66·6	33·4
Tooting...	5,306	3·1	9·4	83·9	16·1
Wandsworth	52,422	31·0	21·5	62·6	37·4

The general death-rate of the whole district during 1893 amounted to 15·3 per 1000, the highest death-rate being in Tooting and the lowest in Streatham. The infantile mortality of the whole district was 137 per 1000 registered births, the rates ranging from 123 in Putney to 146 in Clapham and Wandsworth. The medical officers of health for the combined district report that, owing to a communication from the Metropolitan Asylums Board as to the number of cases admitted into the hospital ships belonging to the vagrant class, it was decided to pay frequent visits to the common lodging-houses in the district. There were, however, no cases of small-pox discovered by this means. The medical officers draw attention to the high fatality-rate of diphtheria and membranous croup in the district (26·9 per cent.), and they urge the necessity of a more extended recognition of the infectivity of diphtheria and the importance of isolating doubtful cases of sore-throat. In addition to a conjoint report upon the whole district by the medical officers of health each medical officer gives a separate report of his own parish: Dr. Oliver Field for Clapham; Dr. W. Orr for Putney and Roehampton; Dr. F. F. Sutton for Streatham, who speaks highly of the new mortuary recently erected in his district; Mr. Lisle Brock for Tooting; and Dr. Caldwell Smith for Wandsworth. Mr. John Muter, public analyst in the district, appends his report to that of the medical officers of health. He states that during the year no samples of drugs were submitted, and he suggests that it is not desirable to lose sight of them. Mr. Muter considers there is need for control, more especially in the case of cheap popular drugs used by the lower classes. We certainly think it would be well if more attention could be paid to this subject in London, not only as to the quality of the drugs, but as to whether the quantities of each drug supplied in bottles of medicine correspond in all cases to the physician's prescription.

Bristol Port Sanitary District.—Dr. Davies and Mr. J. C. Heaven, the port medical officers of health, have issued a very thorough report as to the precautions adopted in their district during 1893, from which it appears that some capital work is being done in regard to prevention of cholera and the improvement of the sanitary condition of vessels. They aptly remark that port medical inspection, as practised in England under the Cholera Order, is liable to be misunderstood, and they point out that such inspection is not an improved form of quarantine, but a rational substitute for it. The essence of medical inspection is, they observe, that it will detect actual cases of cholera and enable proper precautions to be taken in regard to them, and that it will also detect cases apparently sickening for cholera, but cases not yet sickening, though *possibly* incubating the disease, remain undetected. These latter cases are, however, as they point out, notified forward, and are watched by the sanitary authority of the district into which they go. They quite rightly remark that

the occurrence of cases which have been notified forward, and which would be regarded by some as having penetrated our "first line of defence," are in no sense a breakdown of the English system, which involves preparation against cholera, not only in port districts, but also in every inland sanitary district in England. The Bristol port sanitary inspector, whose report is appended to the one just referred to, states that there is a steady improvement in the habitable condition of crew spaces, and that during 1893 no instance of non-ventilation was discovered. The inspector again calls attention to the desirability of lining the crew spaces of iron ships, a condition which, he points out, is usually found in the officers' but not in the men's quarters. He thinks that the best way of remedying the evil is for the Board of Trade to insist on all living-spaces being wood-lined.

Poplar Urban Sanitary District.—Mr. Russell Talbot, the medical officer of health of the Bow parish, estimates its population at 41,143, and its number of inhabitants per house at 7·3. The general death-rate of the parish for 1893 was 23·5 per 1000. In dealing with the prevalence of diphtheria in his district Mr. Talbot remarks that "medical men may be divided into two bodies—the one never notifies 'diphtheria' without the case is typical and complete; and the other does not wait for development." Having regard to the fact that the object of notification is to obtain the earliest information of the presence of infectious disease, Mr. Talbot thinks that it is to the latter class of medical men "that the best thanks of the community are due," and he suggests that the addition of "infectious sore-throat," or even "sore-throat," to the list of notifiable diseases would remove the conscientious scruples of some medical men as to notifying "diphtheria." The Board schools in the Bow district were all inspected during 1893 and Mr. Talbot reports that they are now in a satisfactory sanitary condition. He states, however, that in various instances the filters used in the schools were in a decidedly dangerous condition, and he advises that no filters should be used. The southern district of Poplar comprises the parishes of All Saints, Poplar (56,634), and Bromley St. Leonard (71,336). Mr. Frederick W. Alexander, the recently appointed medical officer of health for this part of the district, reports that he has taken the disinfecting department under his immediate supervision, and it appears that he has succeeded in providing a modern disinfecting apparatus. In dealing with the subject of cowhouses Mr. Alexander expresses a hope that in the near future the county councils throughout the country will appoint veterinary surgeons to periodically examine the cows of milk-sellers, and that proper precautions may be taken as regards any animals affected with tuberculosis, and, we would add, any eruptive disease of teats or udders.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In thirty-three of the largest English towns 6261 births and 3427 deaths were registered during the week ending Nov. 17th. The annual rate of mortality in these towns, which had declined in the preceding three weeks from 18·5 to 16·9 per 1000, rose again last week to 17·1. In London the rate was 15·3 per 1000, while it averaged 18·4 in the thirty-two provincial towns. The lowest rates in these towns were 10·7 in Croydon, 11·0 in Leicester, 11·6 in Huddersfield, 11·8 in Halifax, and 13·3 in Birkenhead; the highest were 22·7 in Burnley, 23·8 in Sunderland, 24·6 in Swansea and in Gateshead, and 26·3 in Newcastle-on-Tyne. The 3427 deaths included 375 which were referred to the principal zymotic diseases, against 385 and 365 in the preceding two weeks; of these, 108 resulted from measles, 73 from diphtheria, 67 from diarrhœa, 51 from "fever" (principally enteric), 37 from whooping-cough, 35 from scarlet fever, and 4 from small-pox. The lowest death-rates from these diseases were recorded in Burnley, Halifax, Leicester, and Norwich, and the highest rates in Portsmouth, Leeds, Newcastle-on-Tyne, Gateshead, and Derby. The greatest mortality from measles occurred in Sunderland, Bradford, Leeds, Portsmouth, Gatesbead, and Derby; from scarlet fever in Birkenhead and Nottingham; from whooping-cough in Gatesbead; and from "fever" in Plymouth. The 73 deaths from diphtheria included 44 in London, 5 in West Ham, 3 in Birmingham, and 3 in Manchester. Two fatal cases of small-pox were registered in Birmingham and 2 in Liverpool, but not one in London or in any other of the thirty-three towns. There were 42 cases of small-pox under treatment in the Metropolitan Asylum Hospitals and in the Highgate Small-pox Hospital on Saturday last, the 17th inst., against 50, 48, and 51 at the end of the preceding three weeks; 3 new cases were admitted during the week, against 8 and 12 in the preceding two weeks. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 2254, against 2285, 2245, and 2258 on the preceding three Saturdays; 215 new cases were admitted during the week, against 223 in each of the preceding two weeks. The deaths referred to diseases of the respiratory organs in London, which had been 329 and 245 in the preceding two weeks, were again 245 last week, and were 192 below the average. The causes of 67, or 2·0 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Cardiff, Nottingham, Oldham, and in ten other smaller towns; the largest proportions of uncertified deaths were registered in Bristol, Norwich, Leicester, and Huddersfield.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 22·2 and 20·3 per 1000 in the preceding two weeks, was again 20·3 last week, and was 3·2 per 1000 below the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 14·0 in Paisley and 16·6 in Leith, to 22·6 in Glasgow and 24·2 in Greenock. The 579 deaths in these towns included 12 which were referred to measles, 12 to diphtheria, 11 to whooping-cough, 11 to diarrhœa, 10 to scarlet fever, 3 to "fever," and 1 to small-pox. In all, 60 deaths resulted from these principal zymotic diseases, against 54 and 84 in the preceding two weeks. These 60 deaths were equal to an annual rate of 2·1 per 1000, which was slightly above the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of diphtheria, which had been 14 and 13 in the preceding two weeks, further declined to 12 last week, of which 6 occurred in Glasgow. The deaths referred to measles, which had increased from 3 to 16 in the preceding four weeks, declined to 12 last week, and included 10 in Glasgow. The 11 fatal cases of whooping-cough were within 2 of the number in the preceding week, and included 6 in Glasgow and 2 in Edinburgh. The deaths from scarlet fever, which had been 7 and 8 in the preceding two weeks, further rose to 10 last week, of which 5 occurred in Glasgow and 3 in Edinburgh. The 3 fatal cases of "fever" were all recorded in Glasgow, and the death from small-pox occurred in Edinburgh. The deaths referred to diseases of the respiratory organs in these towns, which had been 144 and 166 in the preceding two weeks, declined to 155 last week, and were 57 below the number in the corresponding week of last year. The causes of 37, or more than 6 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 23·9 and 22·8 per 1000 in the preceding two weeks, rose again to 23·3 during the week ending Nov. 17th. During the past seven weeks of the current quarter the death-rate in the city has averaged 22·2 per 1000, against 15·9 in London and 19·3 in Edinburgh. The 156 deaths registered in Dublin during the week under notice showed an increase of 3 upon the number in the previous week, and included 10 which were referred to the principal zymotic diseases, against 11 and 12 in the preceding two weeks; of these, 3 resulted from small-pox, 3 from "fever," 2 from diarrhœa, 1 from diphtheria, 1 from whooping-cough, and not one either from measles or scarlet fever. These 10 deaths were equal to an annual rate of 1·5 per 1000, the zymotic death-rate during the same period being 1·5 in London and 1·7 in Edinburgh. The fatal cases of small-pox, which had been 1 and 4 in the preceding two weeks, were 3 last week, making 20 deaths from this disease recorded within the city since the beginning of the current quarter. The deaths referred to different forms of "fever," which had been 3 and 2 in the preceding two weeks, rose again to 3 last week. The 2 fatal cases of diarrhœa corresponded with the number in the preceding week. The 156 deaths in Dublin last week included 22 of infants under one year of

age and 41 of persons aged upwards of sixty years; the deaths of infants showed a marked decline from the number recorded in the preceding week, while those of elderly persons showed a slight increase. Six inquest cases and 9 deaths from violence were registered; and 72, or nearly one-half, of the deaths occurred in public institutions. The causes of 15, or nearly 10 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

Movements of the Medical Staff.

Brigade-Surgeon-Lieutenant-Colonel Williamson has been appointed Senior Medical Officer of the Thames district. Surgeon-Major Rainsford has been posted to Aldershot, and Surgeon-Captain Fayrer has been transferred from the North British district and attached to the Royal Horse Guards for duty. Surgeon-Captain Wright has been posted to Woolwich. Surgeon-Captain McCulloch has been transferred to the South-Eastern district, and Surgeon-Major Fox to Cork. The following officers have arrived from India in the *Dilwarra* on completion of a tour of service:—Brigade-Surgeon-Lieutenant-Colonel Grose, Surgeon-Major Heffernan, and Surgeon-Captains Mallins and Macdonald. The following officers are under orders to return from India at an early date:—Surgeon-Lieutenant-Colonel Macnamara, Surgeon-Captains Dobson and Hale. Surgeon-Captain Minniece has arrived from Egypt. Surgeon-Major Barnes has been appointed Senior Medical Officer at Hounslow. Surgeon-Captain A. R. Aldridge has been instructed to proceed to Netley for duty on Dec. 14th. His commission dates from July 23th, 1886.

Army Medical Staff.

Surgeon-Captain James Rocheid Forrest is placed on temporary half-pay on account of ill-health.

India and the Indian Medical Services.

The services of Surgeon-Captain S. A. C. Dallas (Madras) are placed temporarily at the disposal of the Chief Commissioner of the Central Provinces. Surgeon-Major R. O Cusack, A.M.S., is appointed to the Belgaum and Bangalore districts. Surgeon-Lieutenants H. M. Moore and D. C. Johnston, I.M.S., recently arrived from England, are attached to the Station Hospital at Poona, for duty. Surgeon-Captain W. E. Berryman, A.M.S., takes over the medical charge of the 20th Bombay Infantry and of the Squadron 1st Bombay Lancers, from Surgeon-Major J. MacGregor. Surgeon-Captain G. T. Mould has been granted permission to leave India for one year. *Calcutta Naval Volunteers:* Surgeon-Captain Robert Forrest Dedrickson is reappointed Surgeon.

Naval Medical Services.

The following appointments are announced: — Fleet-Surgeon T. J. Preston for service at Medical Department. Surgeon W. H. S. Stalkartt, M.B., to the *Victory* (additional).

Army Medical Reserve of Officers.

Surgeon-Captain John Victor Walton Rutherford, M.B., 1st Northumberland Volunteer Artillery (Western Division, Royal Artillery), to be Surgeon-Captain.

Yeomanry Cavalry.

Westmorland and Cumberland: Surgeon-Lieutenant J. E. Bowser, M.B., to be Surgeon-Captain.

Volunteer Corps.

Artillery: 2nd Middlesex: Surgeon-Lieutenant-Colonel T. Thyne, M.D., resigns his commission; also is permitted to retain his rank and to continue to wear the uniform of the Corps on his retirement. 1st Fifeshire: Surgeon-Lieutenant A. L. Curror resigns his commission. 2nd Devonshire (Western Division, Royal Artillery): James Philip Stephens Ward, Gent., to be Surgeon-Lieutenant. *Rifles:* 3rd Glamorgan: Edgar Reid, Gent., to be Surgeon-Lieutenant. 1st Volunteer Battalion, the King's (Shropshire Light Infantry): Surgeon-Captain W. Thursfield, M.D., resigns his commission.

Deaths in the Services.

Surgeon-General John Fraser, C.B., M.D. (retired), on Nov. 14th, at Edinburgh, aged seventy-five. He was educated at Glasgow and Edinburgh, obtaining his doctorate at the latter university. In 1841 he entered the Army Medical Department, was appointed surgeon in 1852, deputy-inspector-general in 1858, and surgeon-general in 1872. He served in the Crimea and during the Indian Mutiny. For his services during the first-mentioned campaign he received the medal with three clasps, the Legion of Honour, and the Turkish medal. He also received the medal with clasp of the Indian Mutiny. Surgeon-General Fraser, who was an honorary physician to the Queen, received a distinguished service pension in 1893.

The Naval Medical Staff Examinations.

The undermentioned gentlemen, who competed on the 5th inst. and following days at the Examination Hall, Victoria-embankment, for appointment as surgeons in the Royal Navy, have been granted commissions:—

Names.	Marks.	Names.	Marks.
G. F. S. Sichel, F.R.C.S.Eng.	2920	J. A. L. Campbell	2396
W. B. Macleod, M.B.	2701	B. Ley	2233
W. G. Peck, B.A., M.B. ...	2649	H. P. Jones	2232
A. H. H. Vizard, M.B.... ...	2529	F. F. Mahon	2272
H. Spicer, M.B.	2493	R. H. Way	2261
E. T. P. Eames	2424	A. O. Bobardt, M.B.	2214

The French Expedition to Madagascar.

Our service contemporary, the *Broad Arrow*—which by the way we notice has just been enlarged and much improved—thinks that the French have in their project for the conquest of Madagascar attempted a task the accomplishment of which will involve a great sacrifice of life and money. The country is a difficult one and very malarious in parts, and the distances that will have to be traversed are great and will necessitate the establishment of a chain of posts along the line of communication. The losses from sickness and other causes, it is anticipated, will largely reduce the fighting strength of the force.

The Extension of Service of Surgeon-Major-Generals.

The probable effect which the new rule for extending the service of officers of this rank, in particular cases where considered desirable in the interest of the public service, is naturally attracting much attention. As we pointed out in THE LANCET of Oct. 13th, all extensions of the kind in the upper rank necessarily retard promotion in the other ranks of the service, and medical officers who are likely to be prejudicially affected by such extensions cannot be expected to regard them with any favour. The application of the new rule requires, as we have said, to be severely restricted to exceptional cases where the retention of an officer is very clearly desirable on public grounds.

Sir Joseph Fayrer, K.C.S.I.

Sir Joseph Fayrer, after nearly forty-five years' service in connexion with India, and more than two years' service in the Royal Navy and the Royal Artillery, will retire from his position as President of the Medical Board of the India Office on Jan. 11th next. He was made President of the Medical Board in 1874, and considering what he sacrificed in quitting active employment in India, and the services he has rendered to the Indian Government, he has certainly earned a Surgeon-General's pension, to which he would have been entitled years ago had he decided to remain in India.

The hired transport *Dilwarra* arrived at Portsmouth on the 16th with 241 patients for Netley Hospital.

Nurses at the Hastings Workhouse. — A revision of the system of nursing at this workhouse was agreed upon by the guardians on Nov. 15th. A committee, having considered the question, recommended that an allowance of £24 per annum be paid the present nurse on her retirement; that a head nurse of three years' training, inclusive of midwifery, be engaged at a salary of £25 per year, with allowance for uniform; and also that an assistant nurse and probationer be engaged. Animated discussions ensued, in the course of which one member ambiguously remarked that the little extra expense would be justified if it kept people lingering on beds a shorter time. The superannuation was agreed to unanimously; but the proposal to engage two trained nurses and a probationer met with two dissentients; it was, however, carried by a large majority. The nurses are to be obtained from the Workhouse Trained Nurses' Association and the probationer is to be advertised for.

Correspondence.

"Audi alteram partem."

GENERAL PRACTICE AND HOSPITAL APPOINTMENTS.

To the Editors of THE LANCET.

SIRS,—To THE LANCET the profession naturally turn for an exposition of any subject affecting it generally, and more especially so when the old proverb, *Quot homines, tot sententiæ*, applies. In your very able leading article in THE LANCET of Nov. 10th the following phrase occurs, speaking of individual members of our body: "That their status in the profession as general practitioners would preclude them from being elected on a hospital staff." This sentence contains the gist of a very burning question, and many of us would be very glad to have an authoritative statement from THE LANCET on the subject. I wish here most carefully to avoid entering upon the actual occasion on which the article is based. Leaving on one side the positively pure consultants, a small but most valuable portion of our ranks, either as specialists or general surgeons and physicians, I would contend that the remainder of the profession must be classed under the name of general practitioners. It would be simply impossible for the number of so-called consultants (specialists or otherwise) to exist under any other conditions. Let me note in passing that the present Medical Directory contains the names of over 100 men who are on the consulting or active list of our London general or special hospitals as obstetricians or gynæcologists alone. I could name innumerable instances to give point to my statement. At this instant I have before me a prescription given to a patient of mine for "biliousness," bearing at its foot the name of one of the full surgeons (a teacher also) at a recognised hospital and school. A woman had gas given her for tooth extraction by a "pure" gynæcologist; a like specialist gave ether for another patient of mine at an orthopædic operation, but I will spare your space. I, for one, consider this condition of affairs to be inevitable in the evolution of our art, and, so long as we carry out steadily a strict ethical code and behave honourably one towards another, I can see no cause for complaint. The London and the older University degrees, with the Membership of the London College of Physicians and the Fellowship of the English College of Surgeons, are common amongst the now so-called general practitioners, and a large number of them have had all the advantages of resident appointments and study at the Continental schools. Their faces and voices are well known at our societies, and their professional knowledge is abreast of the times. The attendance in their waiting-rooms would bear comparison with those of their Mayfair (and seemingly hence "consulting") brethren, nor are they unknown as operators and consultants. Yet because they acknowledge that they make a portion of their income by seeing some of their patients twice instead of once for the guinea (as they are quite aware these so-called superiors also do) they are held to be disqualified from becoming even candidates for appointments for which they have specially educated themselves; whilst other "consultants" (?) of less experience, or perhaps none, and inferior qualifications are deemed eligible purely because they reside in the charmed ring-fence of the West-end, and say they never take less than a guinea fee. This matter seems to me to have been well argued out from its scientific aspect in the excellent address read before the Congress at Rome in April last by Dr. Jacobi of New York under the title "Non Nocere," which you reviewed in an article in THE LANCET of July 7th. The same state of things does not, indeed, exist in any country or city other than this. In medicine tradition is hard to kill; even the giant force of evolution, which has produced the changes I have noted, has not effected as yet this necessary modification, and I ask you, as one of the great evolving powers, to say that names should accord with conditions, the one changing as the other does.

I am, Sirs, yours faithfully,

WILLIAM TRAVERS, M.D. Durh., F.R.C.S. Eng.

Phillimore-gardens, W., Nov. 13th, 1894.

*** By reference to the leading article in question it will be seen that the words and the sentiment quoted by Dr. Travers are not ours, but those of the writers of the letter to which we were then alluding.—ED. L.

INQUESTS WITHOUT MEDICAL WITNESSES.

To the Editors of THE LANCET.

SIRS,—Not long ago a policeman discovered a man lying dead, face downwards, in some manure. I was sent for, and on my arrival learned that the deceased was an epileptic, and, seeing froth upon the lips and blood about the mouth, I naturally concluded that he had died in an epileptic fit; but as his face was almost buried in the manure, and taking into consideration that an epileptic seizure as the direct cause of death is very rare, I felt pretty certain that the cause of death was suffocation. Two days later, in driving through the village in which the corpse was found, I met some members of the coroner's jury coming away from the inquest, which had been held without my knowledge and without any medical evidence, or rather without any medical man's evidence, for the constable (an ambulance man) stated that in his opinion death was due to epilepsy, and a verdict to that effect was returned. Thus probably a wrong verdict had been given, and the valuable lesson that it is highly dangerous to leave epileptics alone because of the risk they run from burning, suffocation, &c. was lost. My guinea was also lost to me, likewise the time I had spent in visiting the deceased, for he had no relatives, and the police would admit no liability as regards my fee. Still later—a few months ago—I was called in to see the body of a dead child four days old. No medical man had seen the child alive, the mother having been attended at its birth by a local "wise woman." All the history I could get was from the "wise woman"—namely, that the child was "convulsed inwardly," and that in her opinion "*it* [the complaint, I presume] all lay in the head." There was in this case no inquest, the coroner being apparently satisfied with an expression of opinion by a policeman who had also visited the child, and whose diagnosis was that death was caused by "one of them nasty turns that children do have," or else by that of the "wise woman" with her "convulsed inwardly" theory.

I mention these cases, and I could mention very many more, to show how necessary it is even in apparently simple cases either to have expert medical evidence at the inquest or that it should be tendered directly to the coroner before, in doubtful cases, he makes up his mind to hold no inquest. Besides the very grave results that might follow the system of saving expense by dispensing with medical evidence, there is also the unfairness of making a medical man do work without pay, for it is frequently only by the inquest fee that a medical man has any chance of being recompensed for visiting and examining dead bodies. And if inquests are worth holding at all they are surely worth holding properly—that is, the most accurate verdicts possible should be returned, and the coroner should not, for the sake of saving a guinea, put up with a verdict which, in the words of a once popular song, is—

"The truth, or somewhere near it."

By inserting this letter you will, I am sure, give great satisfaction to general practitioners in the country, who are the chief sufferers as regards loss of fees, as they frequently have very long journeys without any recompense whatsoever.

I am, Sirs, yours faithfully,

Newport, Salop, Nov. 19th, 1894. ARNOLD E. THORPE.

THE BEAVEN RAKE MEMORIAL.

To the Editors of THE LANCET.

SIRS,—At a meeting of some friends of the late Dr. Beaven Neave Rake of Trinidad, which was recently held, it was decided that subscriptions be invited for the erection of a memorial in Guy's Hospital, and for assisting his widow in establishing a nursing home in London, and in the education of his children. It is hardly necessary to remind the profession of the eminent services of the late Dr. Rake to scientific medicine. His work as medical superintendent of the Trinidad Leper Asylum, his able reports and papers on leprosy and other tropical diseases, and his conscientious labours on the Indian Leprosy Commission, all stamped him as a man of true scientific spirit;

and his premature death in the discharge of his duties has given rise to a widespread feeling that there should be some tangible recognition of his services. Dr. Rake, though desirous of doing so, was unable to effect an insurance on his life, and his friends therefore feel that the most fitting memorial to him should take the form, in part, of substantial assistance to his widow and children.

Dr. Pye-Smith, of 43, Brook-street, W., has consented to act as treasurer to the fund; Dr. P. S. Abraham, 2, Henrietta-street, Cavendish-square; Dr. G. A. Buckmaster, St. George's Hospital; and Mr. Alfred Rake, will act as honorary secretaries, and an influential committee is being formed to carry out the objects in view. We shall be obliged, Sirs, if you will insert this appeal in the columns of THE LANCET, and allow us to express the hope that it will be generously responded to.

SAMUEL WILKS, JAMES PAGET,
THOMAS BRYANT, J. FAYRER,
F. W. PAVY, JONATHAN HUTCHINSON.

London, Nov. 20th, 1894.

"ST. JOHN AMBULANCE WORK."

To the Editors of THE LANCET.

SIRS,—Will you permit me, as an ambulance lecturer of three years' standing, to reply to the letter, in THE LANCET of the 10th inst., of Mr. F. J. Judge Baldwin? He states, and correctly states, that "under the County Council Act there is a clause which enables classes of ambulance work to be paid for by the County Council." The Essex County Council, and, I believe, all other County Councils, have through their technical instruction committees liberally used their power. I have given a comparatively large number of "first aid" lectures, and in no case have I ever been offered a lower fee than a guinea for each lecture. In fact, at the present moment I am giving a course of "first aid" lectures for which I am offered a fee of 25*s.* for each lecture, the additional 4*s.* being voluntarily given because I have to drive several miles to and from the Board school in which the lectures are being given. Mr. Baldwin says his object in writing to THE LANCET "is to ask secretaries and medical men generally to abstain from lecturing under ..... the County Council unless they [secretaries and medical men] are paid the fee of a guinea per lecture." I have never heard of a medical man doing so for less than a guinea, and if the secretaries are lay lecturers the practical results are small indeed. The St. John Ambulance Association absolutely refuse to recognise lectures not given by medical men. When properly given no class of lectures is more popular or more appreciated. A large proportion of the pupils show their appreciation by obtaining the First Aid Certificate from the St. John Ambulance Association.

I am, Sirs, yours obediently,
J. GIDLEY-MOORE,
Hon. Surgeon to the St. John Ambulance Brigade.

Ongar, Essex, Nov. 14th, 1894.

"MENTAL THERAPEUTICS."

To the Editors of THE LANCET.

SIRS,—On reading Dr. A. T. Schofield's paper on "Mental Therapeutics"[1] I was reminded of several cases that have occurred in my practice which were certainly cured by mentally impressing upon the patients the certainty that the treatment I intended to adopt would cure them. Such statements were not the exact truth, but I argue I was justified in so acting for what I considered to be for the benefit of the patient. One case was that of an elderly woman about fifty-eight years of age, but who looked seventy at least. She had been under my care for some years for various complaints of a decidedly neurotic character. At last these neurotic symptoms became so dominant that her life was in actual danger. Every organ in her body she considered to be diseased; she had pains like "burning fire" everywhere, inability to take food, loss of power in the limbs, insomnia, and everything, even water, tasted of copper. Previously to this I had tried various methods of treatment by medicine, food, massage, &c., with occasional partial relief, but all these methods were now useless. I consequently adopted what has been justly designated "mental therapeutics." I informed her that death was certain to result, and I considered her only hope to lie in a certain drug I desired to prescribe, but that it was so dangerous that I could only allow it to be administered by a trained and trustworthy nurse, and that it would have to be taken at stated hours to the very second. After the arrival of the nurse I ordered a mixture of pure distilled water only, and impressed upon her, in presence of the patient, the necessity that a tablespoonful of the mixture should be given at 7 A.M. and 12 A.M., 5 P.M. and 10 P.M., not a minute sooner or a minute later; also that a small quantity of liquid food should be given shortly after. At first the mixture and food, the patient stated, tasted like copper, but gradually this disappeared, as well as the other neurotic symptoms, and food began to be relished and sleep obtained. In the course of two or three weeks she was well and able to go about freely, and has not, to my knowledge, required medical treatment for the last two years. In another case I adopted just as casuistical a method of treatment. I was called to see a woman who lived in the "Bush," about forty miles from where I was then in practice. On arriving I found my patient to be a woman in an extreme state of emaciation and in imminent danger of death from incessant vomiting, which had continued for three weeks, during which period, I was informed, not even a teaspoonful of water had been retained on the stomach. After a thorough examination of the case I came to the conclusion that the vomiting was purely hysterical, and ordered her removal to the township where I resided, in order that she might be under my immediate care and have a nurse to attend to her. After her arrival I ordered her to bed and administered a hypodermic injection of four minims of liquor morphiæ into her arm, filling the syringe ostentatiously before her, with the result that she slept for eight hours. On her awakening the vomiting recurred. I then secretly half emptied the phial and filled it with water, and afterwards openly filled the syringe before her and injected four minims, with the result that she slept for twelve hours and the vomiting had decreased considerably. I next day emptied the phial and filled it with water only, going through the same process, with the result that she slept for twenty-four hours and never vomited again, beginning gradually to take all kinds of food. In a fortnight she had recovered sufficiently to ride home on horseback.

I am, Sirs, yours faithfully,
W. J. BARKAS, M.R.C.S. Eng.

Paddington, Sydney, N.S.W., Sept. 24th, 1894.

[1] THE LANCET, Feb. 3rd, 1894.

TABLET IN COMMEMORATION OF THE LATE DR. WOOLDRIDGE.

To the Editors of THE LANCET.

SIRS,—It may interest some of your readers to know that a brass tablet has recently been placed in the chapel of Cranleigh School, where Dr. Wooldridge was educated. The inscription is as follows:—

IN . PIAM . MEMORIAM
LEONARDI . CAROLI . WOOLDRIDGE . M.D.
ALUMNI . CRANLEIENSIS . ILLUSTRISSIMI
QUI . IN CHRISTO . OBDORMIVIT
ANNO . AETATIS . XXXII
A.D. . VIII . ID . IUN . MDCCCLXXXIX
AMICI . HANC . TABULAM . POSUERUNT.

ARTE . SALUTIFERA . MORTEM . QUI . DISTULIT . AEGRIS
IPSUM . NUNC . MORTIS . VIS . INOPINA . RAPIT
AT QUID FLERE OPUS EST? UBINAM VICTORIA LETI?
VIVIT . ADHUC . VITAM . DAT . SINE . FINE . DEUS.

I am, Sirs, yours faithfully,
WM. WELCH.

Cranleigh, Surrey, Nov. 18th, 1894.

"THE PAY SYSTEM AND THE GREAT NORTHERN CENTRAL HOSPITAL."

To the Editors of THE LANCET.

SIRS,—I have this morning received a circular letter, signed by the senior physician and senior surgeon of the Great Northern Central Hospital, in defence of the pay ward system. In this letter two conditions are mentioned as safeguards, the first of which is thus worded: That no patient shall be admitted without the consent in writing of his or her own medical attendant." Verily, this is putting the general practitioner between the hammer and the anvil with a vengeance; for if he give his consent he loses his patient, and if he withhold it he offends his patient, with the

same result. Preserve us from safeguards such as these. The second condition is little better than the first. It provides "that the medical staff should have control, with the house committee, of the admission of such patients." Past experience shows that the medical staffs of the London hospitals are ready to take in anyone who may present himself.

I am, Sirs, yours faithfully,

W. L. PENNY, M.D.

Halliford-street, Islington, N., Nov. 21st, 1894.

"THE ETIOLOGY OF TYPHOID FEVER."

To the Editors of THE LANCET.

SIRS,—If Mr. Eyre could show that in scarlet fever, measles, and small-pox there is a specific organism so closely allied to another non-specific organism, and which is invariably associated with it, that the morphological and physiological differences between the two are less than those which may be artificially induced with the greatest ease in other bacteria, then there would be some logical basis for his contention that we should extend what I prefer to call the "evolution theory" to measles, scarlet fever, and small-pox. Mr. Eyre agrees with me that in a large number of cases of typhoid fever it is impossible to collect any evidence of infection from a previous case. Does he contend that in the case of small-pox, or the other infectious fevers he mentions, it is equally easy to exclude all the possibilities of such infection? There are many arguments—epidemiological, pathological, and even clinical—that support the evolution theory of typhoid origin, but which would not be applicable to the case of other zymotic diseases. These arguments, however, are too lengthy to treat with sufficient fulness in your correspondence columns. I am, Sirs, yours faithfully,

HENRY KENWOOD,
Medical Officer of Health of Stoke Newington,
and also of the Finchley District.

Nov. 21st, 1894.

"CERTIFYING UNDER THE LUNACY ACTS."

To the Editors of THE LANCET.

SIRS,—The letter of "Z," which appeared in THE LANCET of Oct. 20th, is valuable as giving a clear and concise summary of the regulations by which the interests of the patient are sought to be secured before and after he has entered an asylum; but it is surprising to me that so lucid a writer should have based his reply to my letter on what, I would fain believe, is a misconception of a plain statement. I am referred to as having asserted, through ignorance or unmindfulness of the Acts, that the certificates of two medical men "may confine an individual for a lifetime in a lunatic asylum." I wrote "for a period varying from a month to a lifetime," and again, "for an indefinite period." I need hardly say that if a patient be so deprived of his liberty for any period, however short, without adequate cause, the injustice remains. Although "Z" refers to the crudity of the knowledge of insanity possessed by most general practitioners and the neglect of the teaching of mental disease, he apparently believes that the crude knowledge of the untaught practitioner is sufficient to decide the question of asylum or other treatment: revision of the certificates by experts before removal would "in extremely few instances" prevent an individual from being sent to an asylum. This, however, is not supported by the opinion of Dr. Hack Tuke, who, to save patients from the odium of having been placed in an asylum, has advocated the setting apart of some of the wards of our general hospitals for the reception of cases of slight mental disease, as well as others which, if neglected, might develop insanity. Nor can this opinion of "Z" be that prevailing at Glasgow, where, I am informed, about 30 per cent. of certified Poor-law cases have been sent back to their homes after having been kept for a month under observation in the poor-house hospitals, all of which cases would formerly have been confined in the asylum.

If I may venture on an opinion, the main points which should guide the practitioner in deciding whether his patient shall be sent to an asylum or not are the severity and the probable duration of the attack. The disease may be slight and hardly amount to more than eccentricity of character or conduct, or the symptoms, though acute, may be of a transitory character. I can recall two cases of mania in each of which the excitement disappeared within twenty-four hours after treatment had been commenced: in one through the use of the ice-cap and bromides, in the other after purging by five grains of calomel. The former case left hospital after a week and passed from under observation. In the latter case the friends had unfortunately arranged for the patient's removal to an asylum, where he remained one month with no symptoms save the depression naturally following a period of great excitement. It must be evident, therefore, that very thorough knowledge and a very nice discernment are required to decide this question of confinement in an asylum. At present I fear that any one symptom of insanity, such as illusions (which are not pathognomonic, and not what the Germans call the *Symptomen-complex*), may result in the removal of an unfortunate patient from his home. Moreover, in addition to the 30 per cent., or thereabouts, of nervous cases in which asylum treatment would appear to be uncalled for (as at Glasgow), there are many more in which the disease runs its course and terminates in recovery, quite or almost irrespectively of the patient's surroundings. In these cases the questions arising are simply, Can the patient be sufficiently cared for at home or elsewhere outside an asylum? and, Are the symptoms of such a character as to render him for the time intolerable to his friends? I fear that it is the latter only of these two considerations that influences the attendant on well-to-do people, who could easily afford proper nurses. Still worse, it is often the mere feeling of antipathy to the disease on the part of the friends that influences the practitioner and causes him to sacrifice the real interests of the patient; and if so the case is a unique one in medical practice.

The "legal formality" of signing two certificates constitutes, so far as I am aware, the sole ground on which the petition is presented and the magistrate's order granted. Can "Z" point to a case where the magistrate has refused to act? If not, what becomes of this alleged safeguard? As regards revision and reversal of the decision of the two certifying medical attendants after the admission of the patient to the asylum, will "Z" inform the profession how many private patients per cent. of admissions have been rejected at any asylum by the specialist at the head of the institution? By "rejected" I mean sent home during the first week as not insane.

The "legal formalities" preceding his admission are usually carried out behind the patient's back, who very often has been aware of nothing till he is spirited away in a hackney carriage. He has had no opportunity of getting himself coached in the Lunacy Acts, and is obliged to depend on a few wrinkles got from the more intelligent patients. He sees a magistrate, peradventure, but he does not credit him with the power of freeing him from his unpleasant position, for, unlike "Z," he has not read the Acts. He is inclined—often unjustly, I believe—to credit the medical superintendent with being rather too much of an "expert," and is mystified as to how he has gathered his materials for the two reports. Is it during a hasty morning progress through, it may be, several hundred patients? He knows nothing of the keenness of the practised eye or rapidity of the trained judgment; and it would be well that his physician should make him feel that his case is being gone into. Sometimes, I fear, the superintendent relies on the statements of illiterate attendants.

Does "Z" really believe that the Commissioners in their periodical visits "interview all patients"? They may look between them or even at them; but do they often address a patient except when spoken to? Many causes may deter the patient from approaching them—grief, for instance, or natural timidity, or ignorance, or temporary inertia. Yet the man or woman who hesitates is lost (so far as this matter is concerned) for six months, until the Commissioners come round again. Should he be prompt and succeed in saying a few words, the Commissioner will consult with the medical superintendent, and the patient often hears nothing more about it. As for a letter addressed to the Lord Chancellor or a judge, most patients have not been in the habit of corresponding with such august personages, and will hesitate. The letter, I believe, if sent is not always acknowledged, or not promptly acknowledged, and the patient is left to wonder whether the medical officers may not have opened and stopped it, a right which he is aware they occasionally exercise.

If, then, the patient belongs to the minority whose residence in an asylum is unnecessary, he will probably recover his health (which, of course, is usually affected) in a month or two, and will spend his renewed energy in agitating for his release. I do not exaggerate when I say that in some

asylums it may take him from six months to a year to establish his sanity to the satisfaction of the asylum authorities, for it is obviously more difficult to prove sanity than insanity, as "Z" would himself realise should he ever unfortunately become one of his own patients. Is it, then, so "small a matter" that the revision of the opinions expressed on the face of the certificates takes place after, instead of before, removal? There appear to be two very obvious advantages in favour of the latter alternative: 1. Should the removal of the patient to an asylum be found necessary it would be determined on openly, instead of stealthily, as at present. The decision of the experts would mark a definite moment at which the patient would pass, with his own knowledge if his state allowed it, under a new *régime*, and when he would be informed who are to act as his curators or guardians. 2. It would relieve the general practitioner, who may feel that everything was not as it might have been in his student days, from the onus of the final decision, and possibly afterwards from troublesome litigation. If it be objected that the method would be too costly, I reply that Great Britain has spent enormous sums in prosecuting wars for the protection of the liberties of her citizens abroad, even where their number was small. Should not the same principles prevail at home?

I need only add that the medical experts employed should preferably have formerly occupied official positions in asylums, but their connexion with asylums should have ceased. The importance of this subject must be my apology for having written at such great length. All my statements have been the result of personal observation or of evidence which I could not doubt. I am, Sirs, yours faithfully,

Oct. 22nd, 1894. LEX.

*** This letter has been delayed in publication owing to its great length. The letter of "Z." to which reference is made, appeared in our columns on Oct. 20th.—ED. L.

"AUDITORY VERTIGO CAUSED BY WORKING IN COMPRESSED AIR."

To the Editors of THE LANCET.

SIRS,—You published in THE LANCET of May 16th, 1891, the account of a case of apoplectiform deafness which resembled Dr. Curnow's case, treated in the Seamen's Hospital and published by you last week, in many respects. It was that of a railway guard who had suffered from deafness on the right side for eighteen months, which had come on suddenly, and who then had complete loss of hearing, the deafness on the left side having appeared the day before admission whilst he was scrubbing a floor, when he felt something go crash in his head and became unconscious. Other similar cases were referred to in your editorial comments on this case, in which the deafness was complete, more particularly one under the care of Mr. Lucas, a boy aged three years and a half, who suddenly became deaf on both sides. The attack was preceded by tinnitus, but unaccompanied by dizziness; a hæmorrhage in each labyrinth and in the canals was found at the post-mortem examination. Roosa writes on this subject: "The hæmorrhagic or apoplectiform [cases] are those that occur suddenly into the cochlea and semicircular canals in persons who have previously been in good health, and in whose bloodvessels there are no other evidences of breaking down." In view of these points, and without attempting to reflect in the least on the diagnosis that has been made, it seems to me that it must remain doubtful whether the occupation which the man followed in an unusual atmospheric pressure had anything to do with the attack, for as I have shown, these cases are met with when there is no apparent cause for them, and other men following exactly the same employment under the same conditions as this patient remain unaffected. I am, Sirs, yours faithfully,

Nov. 13th, 1894. L.S.A.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

The Newly Elected Lord Mayor and the Infirmary for Children.

MR. WATTS, the recently elected Lord Mayor, following the example of his predecessors in office for some years past, visited the Infirmary for Children on the first Sunday after his election and went through the wards. His lordship was met by the members of the committee and of the medical and surgical staff, the visit affording mutual pleasure.

The Hospital for Women: Opening of the new Dispensary by Lord Derby.

The Hospital for Women, which was established and opened more than eleven years ago, has done very good, useful work, as may be gathered from the following figures. In the first year of its existence 2736 patients were treated, while in the year ending Dec. 31st, 1893, the patients treated numbered 4029; during this latter period the receipts from voluntary payments of patients and private nursing fees amounted to £1142. During the ten and a half years of the hospital's existence ending Dec. 31st, 1893, no fewer than 39,861 patients have been treated, at a gross cost of £19,165; but as the voluntary payments of patients and private nursing fees amounted to £6858, the actual cost was only £12,307, an average of 6*s.* 2*d.* for each patient — compared with six metropolitan hospitals of a kindred nature this showed very economical management. The hospital consisted originally of two private houses, which were adapted for the purpose at considerable expense in structural alterations, drainage, &c.; the new dispensary cost nearly £1000, while the recent enlargement of the interior of the hospital wards, with new lift &c., involved a further outlay of £600. For the present year there is a deficit of £400. Under these circumstances the committee appealed earnestly for support, to which a very generous response had been made. The opening of the new dispensary and wards took place on the 16th inst., Lord Derby (accompanied by Lady Derby) performing the opening ceremony, in the presence of a large and representative gathering of ladies and gentlemen. In the course of his speech Lord Derby observed that for many years he was connected as a layman with a large London hospital, so he knew very well what demands there must be in a great community like Liverpool; and how sickness, and especially illnesses of certain classes, were found in almost every home, and how day by day science and charity, going hand in hand, were doing their best to redress evil and to deal with the wants which they saw around them. Liverpool might be proud of many things: she might be proud of her commerce, of her trade, of her shipping, her great public works, and so forth; but, perhaps with pardonable pride as a neighbour, he ventured to think that she might look with almost equal pride to the large number of useful and charitable institutions which were within her boundaries, and which contributed to the help of her population. Lord Derby concluded a powerful speech by appealing to the public to help the committee of the hospital with increased support.

Death under Chloroform.

An inquest was held by the city coroner last week on the body of a lady, the wife of a prominent citizen, who died while under the influence of chloroform. She had previously had it administered to her on several occasions during her confinements, and more recently for a dental operation, with perfect success. On this occasion she went by appointment to Mr. Osborn, dentist, who has been in practice in this city for twenty-seven years. He has had a very large experience of anæsthetics, and both he and Mr. Larkin, who administered it on this occasion, could say that until this case no fatal case had happened from anæsthetics in their personal experience. Mr. Larkin had been chloroformist to the Royal Infirmary for years, and had administered chloroform in many cases. On this occasion the patient had abstained from food and had taken the chloroform well after some struggling, when suddenly her face was observed to be slightly livid; the administration of the chloroform had been stopped, and Mr. Larkin had considered that she was ready for Mr. Osborn to begin. Every effort was made by both gentlemen, aided by Mr. Osborn, jun., and Dr. Briggs, to restore suspended animation, which, as the breathing continued, they hoped might prove successful, but though these efforts were continued for three hours they were unavailing. Much sympathy is felt for the husband and children of the deceased. The jury returned a verdict of "Death from misadventure," adding that the chloroform had been skilfully administered. The post-mortem examination revealed some slight affection of one kidney, which had not been previously suspected, but the heart and all the other organs were healthy.

Nov. 20th.

NORTHERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

The Health of Newcastle-on-Tyne: Increase of Scarlet Fever.

THE number of infectious diseases notified during the last fortnight is, strangely enough, exactly the same as that for the preceding two weeks; but there is an increase of scarlet fever, which has reached 56 cases. In all, there have been 103 cases of infectious disease.

Nursing at Tynemouth.

The governors of the Tynemouth Infirmary are about to try an experiment which may turn out to be a great advantage to the people of the town and district. They are about to engage a staff of trained nurses, who may be hired by the people in the borough on reasonable terms. There is a want of skilled nursing, especially amongst the middle classes, which, it is hoped, will now be supplied. The infirmary is not expected to reap any pecuniary advantage from the scheme.

Diphtheria at Byers Green, Durham.

There has been a serious outbreak of diphtheria at Byers Green. The cause of the first outbreak has not been accounted for; but house-to-house visitation and mingling at school would probably be factors in the spread of the disease.

Hexham.

At the ordinary meeting of the Hexham Local Board, Mr. John Lisle presiding, a memorial was read from a number of residents in reference to the Convalescent Home. The memorialists stated that quite recently a case of typhoid fever occurred in Gilesgate, and was removed to the Convalescent Home, thus causing great danger of spreading the disease and endangering the lives of the inhabitants of the locality. The memorialists were not aware that the Convalescent Home was ever intended by the promoters to be made a hospital for the reception of contagious and infectious diseases, and had reason to think that this was not the first case of the kind that had been taken there, and they asked the board to use the power invested in them to prevent anything of the kind occurring again.

The late Accident to the Scotch Express.

It is said that the condition of Curry, the fireman who was injured in the late railway collision at Northallerton, is such as regards his memory that he cannot be examined as a witness, and that the Board of Trade proceedings are consequently postponed.

Newcastle-on-Tyne, Nov. 21st.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Edinburgh Obstetrical Society.

A MEETING of this society was held on Nov. 14th, Dr. A. H. Freeland Barbour (President) being in the chair. The following office-bearers were elected for the ensuing session:—President, Dr. A. H. Freeland Barbour; vice-presidents, Dr. Jas. Ritchie, Dr. Halliday Croom; treasurer, Dr. Wm. Craig; secretaries, Dr. J. W. Ballantyne, Dr. F. W. N. Haultain; librarian, Dr. Milne Murray; members of council, Professor A. Russell Simpson, Dr. J. Haig Ferguson, Dr. Felkin, Dr. N. T. Brewis, Dr. Lucas, Dr. Menzies, Dr. Stewart Stirling, Dr. Keppie Paterson.

Dr. Freeland Barbour read an eloquent presidential address on Some Aspects of Heredity. In introducing the subject he alluded to the fact that of recent years the discussion on the nature and physical basis of life has given place to one on the nature and physical basis of heredity. The two discussions are closely related, because one of the characteristics of life is the power of reproduction, which means not merely to produce living matter but to reproduce itself, and reproduction implies heredity. The first scientific theory of heredity was given in 1864 in Herbert Spencer's "Polarity of Physiological Units." This was followed in 1868 by Darwin's "Pangenesis of Gemmules." In 1870 Hering threw out his conception of "Memory in Organic Matter," and two years later came Galton's "Stirp," in which we first find the idea of the "continuity of the hereditary material." In 1876 Haeckel brought forward the "Perigenesis of the Plastidules," and in the same year appeared Jaeger's "Aroma," with a more definite statement of the "continuity of the germ-plasm." Brooks in 1883 gave another modification of pangenesis, ascribing different functions to the "male and female cells," and explaining variation by "sexual union." The same year saw Weismann's first article on "Heredity," which was followed two years later by his "Continuity of the Germ-plasm," and again last year by his "Germ-plasm." Dr. Barbour then briefly analysed the doctrines of Herbert Spencer, Haeckel, Jaeger, and other philosophers, and showed, looking at their theories collectively, that heredity has been described in terms of chemistry, physics, physiology, and biology: as crystallisation by Spencer, unconscious memory by Hering, rhythmic motion by Haeckel, and stable organisation by Weismann. Darwin's and Weismann's theories represent two diametrically opposite views; Galton's and Brooks' simply an intermediate position. Dr. Barbour then considered the attitude of the gynæcologists to these theories. We find, he said, that the reproductive part of the cell community and the changes in its activity exercise a great influence over the whole. The facts of puberty and the menopause and the effects of removal of the ovaries point to a close connexion between the reproductive cells and the body generally. These cells do not occupy an isolated position in the economy. There is a difference of opinion among gynæcologists as to the effect of removal of the ovaries on the organism as a whole. Lawson Tait minimises the influence, Routh accentuates it. Gynæcology can throw much light on this aspect of heredity, whether the reproductive and the somatic cells occupy two distinct spheres which do not intersect, and this is worthy of careful investigation. Another question is the influence of a former husband upon the children. Among breeders it is recognised that this influence may be seen in the offspring born to a second mate. This shows that the father's influence extends beyond the offspring and affects the maternal organism. Darwin showed this occurred more apparent in the action of pollen on the ovules and beyond these to the ovarium as well. But this influence has not been established in the human female. Darwin's theory implied that the material basis of heredity was made up anew in each generation. The parents were the central goods terminus, or rather starting-point, from the city into which lines converged from the country; each district sent in its quota of goods; these were sorted and arranged so that the train which left the goods shed carried a fair sample of all the products of the country. Weismann's theory implies that this station is not a starting-point, but on the main line from somewhere else—that the train was not made up here but has come "through." Probably some middle ground between the extreme positions of Darwin and Weismann will be found to be the firm one—that while receiving the new, we shall not stop the old.

The Edinburgh Degree in Medicine for Women.

Application was made some time ago by both Schools of Medicine for Women in Edinburgh, and also by women who had studied in Edinburgh and were on the Medical Register, to have the examinations they have already passed recognised as equivalent to the University examinations, and seeking permission to appear for the final examination alone or for such examination as came next in order after those they might already have passed. The reply given to these requests by the University Court is that such permissions and concessions are *ultra vires* of the court. This answer is what might have been anticipated, and it remains to be seen whether the Commission will produce an ordinance granting to women privileges and concessions it has not granted to men. The University Court does not seem to have yet settled even what preliminary examinations it is to accept as sufficient from women who have already been studying medicine for some years. The delay on this point is preventing female students matriculating, and may mean the loss of a year to not a few of them.

Infectious Diseases in Edinburgh and Leith.

Last week 14 fresh cases of small-pox were intimated in Edinburgh and 1 in Leith. In Edinburgh there is a considerable epidemic of scarlet fever and measles, 41 cases of the former and 40 of the latter having been reported.

Important Legal Decision in Public Health Affairs.

An action was recently raised by one of the Public Health District Committees of Midlothian against a local parochial board for expenses incurred in the treatment of a pauper

patient who was notified as suffering from erysipelas in a common lodging-house and was removed to the local hospital. The case was tried in Edinburgh Sheriff Court. It was held by the sheriff as proved that the man was a pauper and that he was intimated by the parochial medical officer as suffering from erysipelas. He further held that there was no statutory liability upon the local authority to maintain pauper patients, even when suffering from infectious disease, but that it was the duty of the parochial board not only to give parochial relief and maintenance, but also to provide proper medical attendance. It is apparent that this is a very important decision, and the public health authorities have been waiting for a thoroughly good case to test this question, and to have a legal decision arrived at.

Scottish Microscopical Society.

This society held its first meeting for the new session last week. The President, Mr. J. Arthur Thomson, lecturer on biology in the School of Medicine, gave an address on the Present Phase of Evolution Theory. Dr. G. Mann gave a Lantern Demonstration of Nerve Cells during Various Stages of Activity, a subject to which he has of late paid much attention, and in which he has opened up a most interesting and important line of investigation.

Sir Charles Tupper in Edinburgh.

The opening address at the Royal Scottish Geographical Society was delivered in Edinburgh last week by Sir Charles Tupper, Bart., G.C.M.G., High Commissioner of the Dominion of Canada, on the Economic Development of Canada. The Marquis of Lothian occupied the chair. Sir Charles Tupper is a graduate in medicine of the University of Edinburgh of somewhere about the year 1843.

A Link with Last Century Surgery.

Last week Sheriff Francis Russell died in Edinburgh in his eighty-first year, having been born in 1814. He was the youngest son of Dr. James Russell, Professor of Clinical Surgery in the University of Edinburgh, who preceded Syme. Sheriff Russell remembered having met Sir Walter Scott and other eminent Scotsmen in his father's house. To those who did not know of Sheriff Russell's existence, the intimation of his death and of his relationship to the clinical professor, whom most Edinburgh students must know by name, seemed like a voice from the middle of last century.

Aberdeen Medico-Chirurgical Society.

The annual meeting of this society was held on Nov. 15th, when the following office-bearers were elected for the year 1894–95:—President: Dr. William Stephenson. Vice-President: Dr. J. C. Ogilvie Will. Secretary: Dr. G. M. Edmond. Recording Secretary: Dr. Thomas Milne. Treasurer: Dr. John Gordon. Librarian: Dr. George Rose. Council: Drs. R. J. Garden, Angus Fraser, P. Blaikie Smith, G. Gibb, and J. Rodger.

Zymotic Diseases in Aberdeen.

The following zymotic diseases were notified last week in Aberdeen:—Measles, 36; scarlet fever, 17; diphtheria, 4; typhoid fever, 1; typhus fever, 1; whooping-cough, 7; erysipelas, 6—total 72, being a decrease of 19 as compared with the previous week.

Nov. 17th.

IRELAND.

(FROM OUR OWN CORRESPONDENT.)

Catholic University Medical School: Medical and Scientific Society.

THE inaugural address for the session of this society was given by Professor A. Roche on the evening of the 19th inst. The lecturer took for his subject the Present State of Sanitary Science in Ireland: its Deficiencies, and some Suggestions for Removing Them. The sanitary executive is practically in the hands of the medical officers of health, who with few exceptions are the dispensary medical officers, and their subofficials the sanitary inspectors. As regards the education these officers have received in sanitary science, up to a few years ago the attendance on lectures in this branch of medical science was not required nor any examination worth the name. About three years since Prof. Roche drew attention to this state of things, and advocated that the attendance on a course of lectures in hygiene should be compulsory in the medical curriculum. The proposal received the support of the medical press, a committee of influential gentlemen was formed, and a memorial presented to the General Medical Council. The Royal Colleges of Surgeons and Physicians of London, the Durham University, and the Royal University of Ireland assented to this most obvious requirement in medical education. Professor Roche regretted that the Dublin Colleges had not, so far, done so, but had proposed that hygiene should be included in the already too short course given to medical jurisprudence. He did not consider that the training the future medical officers of health in Ireland was sufficient to qualify them for the post, sent down as they were knowing little of the subject, having to contend against the diffidence of the sanitary boards, the opposition from want of knowledge of the people, and wretched remuneration. Too frequently the sanitation was neglected or overlooked. They should, he thought, appoint specially trained medical officers of health, to oblige this officer to give his whole time to the duties, and give him adequate remuneration. It must be remembered that sanitary science or preventive medicine occupied a completely different position to curative medicine. The latter must always remain in the hands of the few—the medical profession—but the prevention of disease and the preservation of health should be the common knowledge of the people; and he considered that some hours every week should be given to this teaching in the national schools. In this we should only be following the good example set by Belgium and Germany, where it had for some years formed part of the teaching in such schools; and to carry out this teaching effectually the future schoolmasters should be instructed by competent lecturers. He would propose a central organisation for Ireland, with a museum, library, lecture-halls, and bacteriological laboratories. Its objects would be to diffuse throughout the country the knowledge and advantages of sanitary reform. To do this by giving popular lectures, not alone in Dublin, but in the provincial towns; to hold meetings; to discuss sanitary subjects, more especially those affecting Ireland; to give technical lectures, and to give instruction, examine, and grant certificates of efficiency to future sanitary inspectors. As regards the funds to sustain such an organisation, the receipts from the lectures and subscriptions from the members would supply something, which should be supplemented by a Government grant.

Health of Ireland for September Quarter.

During the quarter ended Sept. 30th last there were registered in the 802 registrar's districts in Ireland 24,802 births, equal to 21·6; and 16 571 deaths, or 14·4. The birth-rate was 0·8 under the average rate for the corresponding quarter of the last ten years, and the death-rate 0·4 under the average. The low general death-rate and the slight mortality from the principal zymotic diseases show that the public health of Ireland during the past quarter was fairly satisfactory. For the first time since 1881 cases of small-pox were numerous in Dublin, and the disease caused several deaths there; the malady also appeared, but only to a limited extent, in two or three other localities. Measles, scarlet fever, whooping-cough, and enteric fever proved rather fatal in a few districts, but the greater part of the country was practically free from these diseases. Small-pox caused 17 deaths, measles 57, scarlet fever 60, typhus fever 59, being 34 per cent. below the average; whooping-cough, 205; diphtheria, 82; and enteric fever, 147, or 77 under the number for the corresponding quarter of last year.

The Late Dr. James McCosh, LL.D.

I regret to learn the death of Dr. James McCosh, which occurred at Princeton, State of New Jersey, on Friday, Nov. 16th. He held for nearly forty years a prominent place among philosophical writers. His literary work originally secured for him the Professorship of Logic and Metaphysics in Queen's College, Belfast, where he remained for sixteen years. In 1868 he became President of the College of New Jersey. Dr. McCosh, in addition to the degree of LL.D. Harvard, was also an honorary LL.D. of Aberdeen University, and a D.Lit. of his old college, Queen's College, Belfast.

Dr. P. T. O'Sullivan, late house surgeon to the Cork South Infirmary, has been elected extern surgeon to the hospital.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

The Charitable Aspect of Betting.

IT cannot be denied that the gambling attaching to horse-racing is the source of much misery, and that an indulgence in it means the ruin of many a man. The stay-at-home Englishman is not in a position to judge of the formidable extension assumed in this city in recent years by this dangerous pastime in all ranks of life. When the institution yclept the *pari-mutuel* was established a few years ago, the Government decided that a certain percentage of the money risked should be allotted annually to good works, such as hospitals, crèches, orphanages, &c. The committee appointed to apportion the funds available amongst the different charities met on Jan. 17th last, and the appended list will show that the year's takings left at their disposal amounted to no less than 267,950 francs. Those unfortunate persons whose "tips" have the habit of not "coming off" will have the satisfaction, at any rate, of knowing that a proportion of their money is utilised for most worthy purposes. The Government in thus feeding the hospitals may be said to be making the best of a bad propensity.

The Municipal Council and the Hospitals.

There appears to be some doubt in the minds of some members of the Municipal Council as to the application of the rule obtaining in Paris hospitals that those patients whose means allow it should pay a daily sum for their maintenance and treatment. The Council has accordingly directed that a return shall be issued for each hospital stating the number of patients, especially paying patients, admitted between Jan. 1st and Nov. 1st, 1894, together with the duration of the treatment in each instance. A proposal to appoint for each hospital a Commission, whose duty it shall be to fix a tax on surgical operations, was referred to the Commission of the Assistance Publique. It was further resolved to transform with the least delay possible the Hôpital Herold—now utilised as an overflow hospital for the Hôtel Dieu—into a children's dispensary. The need of such an establishment is severely felt in the neighbourhood, which comprises the populous 17th, 18th, and 19th arrondissements.

The Cause of Death in Cocaine Poisoning.

M. Maurel of Toulouse[1] communicates the result of his researches on the mechanism of death from fatal doses of cocaine. Laboratory experiments enable him to state that the drug acts on the capillaries, causing their contraction, and on the leucocytes which, under its influence, become globular and rigid, whilst they swell and lose their property of adhering to the sides of the bloodvessels. It is thus seen that thrombosis and embolism (the plugs being composed of the red corpuscles) may easily form, and, according to M. Maurel, pulmonary embolism is the *contre-temps* most to be dreaded when cocaine is employed. Arguing that intra-arterial injections of cocaine made in the direction of a non-vital part of the body would be harmless, M. Maurel confirmed this by introducing with impunity into the femoral artery of the rabbit as much as 10 centigrammes per kilogramme of body weight. He has observed the leucocytic changes mentioned above when a small quantity of a concentrated solution of cocaine—e.g., 10 per cent.—is injected. This exemplifies the danger of employing strong solutions for anæsthetic purposes. It may be remembered that M. Reclus, an ardent advocate of cocaine anæsthesia for even considerable operations, has never ceased to declaim against the use of concentrated solutions. In conclusion M. Maurel states that in fatal accidents from cocaine the chief and most frequent cause of death is pulmonary embolism due to the swollen and paralysed white corpuscles forming plugs in the contracted capillaries of the lung. I would ask, however, if syncope from fright does not suffice to account for such an accident in a nervous patient operated on in the sitting posture? The other day I was called upon to administer chloroform to a delicate woman for tooth extraction. The operator was quite surprised when I insisted on the patient remaining during the entire *séance* in the recumbent posture. I am convinced that if dentists would accustom themselves to operate with the patient lying down we should hear of fewer accidents from cocaine or other anæsthetics.

[1] Académie de Médecine, Nov. 13th.

French Surgical Congress.

The next congress will be held in October, 1895, the first meeting being fixed for the third Monday of that month. The questions to be discussed are: Surgery of the Lungs (the pleura excepted), and Early or Late Operative Intervention in Fractures (fractures of the skull being excluded).

Nov. 24th.

VIENNA.

(FROM OUR OWN CORRESPONDENT.)

Transplantation of the Human Cornea.

AT a recent meeting of the Vienna Society of Physicians, Professor Fuchs exhibited a case of transplantation of the human cornea. It is well known that Professor Hippel has succeeded in transplanting pieces of the cornea in four cases; but the pieces of cornea that he transplanted were small, whilst Professor Fuchs used flaps of from 4 to 5 mm. in diameter. Large pieces of the cornea, when transplanted, do not become opaque so soon as small ones. The pieces for transplantation used by Professor Fuchs in his case were taken from a human eye. Four weeks had elapsed at the time of exhibition since the operation had been performed, and the piece implanted was perfectly transparent, while in previous cases the opacity had commenced after the tenth day.

The Antitoxin Treatment of Tetanus.

Dr. E. Schwarz reported last week on a case of tetanus treated by Tizzoni's antitoxin. The treatment was commenced on the second day of the disease, and the spasms disappeared under the treatment, but the temperature rose during this time from 37·3° C. to 40·3°, and the patient after the fourth injection died from heart failure. It was clear that the leucocytosis was increased in consequence of the treatment. The number of the leucocytes was 11 000 before the first injection, rising to 18 000 on the next day, and was 17,000, 16,000, and 15,000 on the following days. Dr. Schwarz recommended the use of stronger doses of the antitoxin than those prescribed by Tizzoni.

Cholera in Austria.

Last week the cholera epidemic attained greater activity in Galicia, and some cases occurred in Lemberg. Since the beginning of the epidemic 13,160 cases with 7177 deaths have been officially recorded in Galicia, and 861 cases with 489 deaths in the Bukowina. Some sporadic cases have also occurred in Hungary.

Nov. 13th.

NEW YORK.

(FROM OUR OWN CORRESPONDENT.)

Action of Health Authorities in the Prevention of Tuberculosis.

THE question of the propriety of officially recognising and treating tuberculosis as a communicable disease is just now agitating both the health authorities and the medical profession in this country. The Michigan State Board of Health requires notification and registration of cases of consumption, but does not insist on isolation. The Pennsylvania State Board of Health is considering the advisability of issuing similar orders. The Board of Health of the City of New York has—instead of adopting registration—recommended that physicians and other persons to whom the knowledge of a case of tuberculosis may come be requested to report to the Health Department all such cases within seven days of the time when such sick persons come within their observation. A member of the Board explains the method of procedure as follows. Reports of cases are carefully guarded by the Board of Health. They are considered as being confidential, and no physician or patient need fear the facts becoming known. The relations of the inspectors of the Board of Health to individual physicians who report cases are governed by strict professional courtesy. The services of the bacteriological laboratory can be had by any physician who, on reporting a case of consumption, forwards with his report a small amount of sputum from the suspected case. Physicians are informed through the agency of the medical press and circulars of information from the Board of Health, or depôts, at which they can obtain, free of expense, "culture tubes" in which the suspected matter is placed, and which have to be returned to the depôts properly labelled. The collectors make the rounds of the depôts

daily, collecting the tubes charged during the preceding twenty-four hours and which have been returned to the depôts for collection. The charged tubes are taken to the bacteriological laboratory and are examined for the tubercle bacillus, and a report is forwarded to the physician in charge of the case informing him of the facts. As soon as a case is diagnosed as tuberculous, an inspector visits the house and leaves circulars of information, which are concise and direct the patient and those in contact with him exactly how to avoid the danger. All the preventive means are aimed at the destruction of the infected sputa. For instance, a case of consumption being discovered, the circulars are delivered to the family. On the death of the case the premises are disinfected and are not permitted to be used by any other family after the removal of the immediate family of the patient until they have been thoroughly renovated by scrubbing, painting, and kalsomining. This is obligatory on the owner or lessee of the premises, and is enforced through the order of the Board of Health. No hardship can possibly be inflicted on the patient or his family through the knowledge of the Board of Health of the case, and there is no question as to the practicability of this movement. Whether or not the registration of consumptives will be made compulsory in New York will depend on the outcome of the present work. The records are kept with a view of having infected places indexed under streets and numbers, and the aim is to surround every case of consumption with safeguards to prevent its spread. No results of this work will be shown in twenty-four months probably, although they may be shown in twelve. Physicians generally recognise the necessity for a certain supervision of cases of consumption, and the outcome of the work shows this very distinctly, as they report from 60 to 100 cases every week availing themselves of the facilities offered for correct diagnosis. Among medical men there is a general concurrence of opinion as to the usefulness of registration, but much doubt is expressed as to its practicability. It is alleged that if a person is registered as a consumptive it might interfere with his business, or his opportunities for marriage, or his social and religious privileges. The position which the New York health authorities have taken is regarded as preferable to compulsory registration.

Placarding Domiciles where Contagious Diseases Exist.

For some time the New York Board of Health has placarded the doors of domiciles in which persons suffering from diphtheria, scarlet fever, or measles are found. The inmates of the apartments complain bitterly of the publicity this gives them, and the subsequent avoidance of them by other people in the same house. These complaints are very gratifying to the health authorities, as they prove that the scheme is accomplishing the objects sought. The placards are coloured as follows: for scarlet fever it is red; diphtheria, white; measles, blue. The diphtheria placard, for example, reads as follows: "DIPHTHERIA.—All persons not occupants of this apartment are notified of the presence of diphtheria in it, and are warned to avoid it until this notice is removed. The persons sick with diphtheria must not leave the apartment as long as this notice remains here." It is alleged that the moral influence of such placards, both upon the inmates of the apartment, the inmates of the house, and strangers or visitors to the house, will be of as great service in enforcing isolation and preventing extension of the disease as the visits and instruction of the inspectors.

An Epileptic Colony.

The State of New York has made final arrangements for establishing a colony of epileptics. These unfortunate dependents are now scattered through the almshouses and asylums for the insane, where they receive no adequate care and treatment. The colony has been planned on a very liberal basis. A large tract of land has been purchased and suitable buildings are to be erected. The managers include the most competent physicians and laymen. The institution is destined to become one of the most useful and notable charities of this State.

Nov. 10th.

AUSTRALIA.

(FROM OUR OWN CORRESPONDENT.)

Action of Snake Venom.

DR. G. B. HALFORD, Professor of Physiology in Melbourne University, has just published a small volume entitled "Thoughts, Observations, and Experiments on the Action of Snake Venom on the Blood," in which he sums up the results of his own work on this subject and the results of recent investigations by Dr. C. I. Martin at Sydney, and Dr. Calmette at the Pasteur Institute. He maintains that the venom of Australian snakes is as virulent relatively as that of the cobra, the minimum fatal dose per pound weight being considerably less than that given for the cobra by the Indian Snake Commission. He claims for the poison the rank of a powerful ferment, here differing from Dr. Martin, and repeats his original statement that it acts primarily on the blood, and secondarily on the nervous system. The post-mortem effects of the poison on the blood are seen in the prevention of coagulation and in the production of large cells. Dr. Calmette's researches on the action of chloride of lime are regarded with favour, though Dr. Halford has not yet had an opportunity of completely confirming them experimentally, as the account of them reached Melbourne just as his book was being published, and is given in an appendix.

A Medical Defence Union for Victoria.

A meeting of medical practitioners was recently held in Melbourne, at which it was decided to form a Medical Defence Union for Victoria, on the lines of the Medical Defence Union of Great Britain. The new society is to be a registered company, limited by guarantee, and a provisional committee was appointed to draw up rules.

Vital Statistics of Sydney.

The mortality returns for Sydney still continue high, those for August being considerably above the average, chiefly from the prevalence of influenza and diseases of the respiratory system. The season has been a trying one for those affected with phthisis and the aged. There were only two deaths from typhoid fever.

Case of Hyperpyrexia in Delirium Tremens.

Dr. A. V. M. Anderson recently read notes of a case of delirium tremens, in which on the third day of the attack the patient became unconscious and livid; his pulse was 156, weak, and compressible; and his temperature under the axilla 108·4° F. He was placed in an ice-pack for three hours and a quarter; he then became conscious, and the temperature fell to 99·4°. In about nine hours it had risen to 105·6°. Another ice-pack was given, and the patient remained in it six hours and a half, the temperature falling to 100·4°. The following evening a further rise took place and an ice-pack was given, as the temperature reached 102·8°; the temperature fell almost at once, and never again rose above 101·6°.

Experiments with Ringworm Fungus.

At the last meeting of the Victorian Branch of the British Medical Association Dr. Herman Lawrence exhibited some guinea-pigs which he had successfully inoculated with ringworm. He first made some pure cultures on gelatine from some hairs affected with the tinea microsporon (of Sabourand), and from the cultures the guinea-pigs were inoculated. The hairs affected broke off leaving a perfectly smooth patch, without any stubble hairs usually seen in tinea tonsurans, and looking much more like patches of alopecia areata.

Recommendations re New British Pharmacopœia.

A subcommittee of the Victorian Branch of the British Medical Association have sent in a very full and exhaustive report on the proposed alterations in the British Pharmacopœia. The more important recommendations are that the present restrictions as to growth and preparation be removed as far as Victoria is concerned from a number of drugs which can be grown as well in Victoria as in the present recognised official places. The papaver somniferum, for instance, grows luxuriantly in Victoria and yields morphine fully equal to that grown in Asia Minor. It is advised, also, that duboisia be made officinal, and that the new formulæ given for preparations of eucalyptus be substituted for the present unsatisfactory official formulæ.

Successful Case of Loreta's Operation.

At the last meeting of the Medical Society of Victoria, Dr. R. B. Duncan showed a woman upon whom he had performed Loreta's operation for stricture of the pylorus three years and a half previously. She then weighed 7 st. and had constant pain and vomiting. Now she weighs over 14 st., and enjoys perfect health, showing that the dilatation of the pyloric orifice has been permanent.

Bond's Operation for Hydatids.

The treatment of hydatids continues to occupy attention

here. Dr. W. Moore records three cases treated by Bond's method. All recovered, but in one case suppuration occurred and the incision had to be reopened. The second case made a perfect recovery; the third case appeared to recover, but fluid reaccumulated in the cyst, which had to be reopened. Dr. Moore points out that when fluid reaccumulates or pus forms, the incision in the cyst is applied so closely to the abdominal incision that there is no danger of escape into the peritoneal cavity, and the operation for its relief is very simple; but he admits that further experience will be required before we can decide on the position this operation is to take in the treatment of abdominal hydatids.

Oct. 20th.

Obituary.

SURGEON-GENERAL JOHN FRASER, M.D. EDIN., C.B.

WE regret to announce the death of Surgeon-General Fraser, C.B., at Edinburgh, on the 14th inst., from cerebral hæmorrhage. The late officer was the son of the Rev. Simon Fraser of Stornoway, and was born in 1819. He was educated at Aberdeen, Glasgow, and Edinburgh Universities, obtaining the degree of M.D. at Edinburgh in 1840. He entered the medical service of the army in 1841, and retired in 1879, after a career of long and distinguished service in the Crimean and Indian Mutiny campaigns. The list of names of officers who played a prominent part in these big historical events is fast diminishing, and although the late surgeon-general had reached a good age, the loss of men who did good service in their day under exceptionally trying circumstances must always be regretted. He served with the 2nd Battalion, Rifle Brigade, throughout the Crimean War, including Alma, Inkerman, and the siege of Sebastopol, and subsequently in Bengal and the North-Western Provinces during the Indian Mutiny, having been present at the capture of Lucknow and in several of the engagements at that time. Surgeon-General Fraser was the senior medical officer in Oude under Sir Hope Grant, was honourably mentioned in despatches, and received a C.B. in recognition of his services. The late officer was in the possession of the French Legion of Honour and the Turkish medal for his services in the Crimea, with the medal and clasps of that campaign, together with the Indian medal for his services in that country during the Mutiny, and was at the time of his death in receipt of a distinguished service pension. On retiring from the army in 1879 he was made an honorary physician to the Queen. He resided in Edinburgh, where he was prominent in many philanthropic and benevolent works, both as an elder of the Free Church of Scotland and as a director of the many charities to which he was attached.

ALBERT NAPPER, M.R.C.S. ENG., L.S.A.

WE announce with regret the death of Mr. Albert Napper, a well-known and respected inhabitant of Guildford. He was born in the year 1815 and received his medical education at St. Thomas's Hospital and at Edinburgh. In 1840 he commenced practice in Guildford, and in 1854 removed to Cranleigh and continued to practise there until 1881, when he was succeeded by his son. Mr. Napper, who was the originator of cottage hospitals, founded the Cranleigh Cottage Hospital. He took a keen and active interest in the subject of gratuitous medical services to the sick poor in villages, and wrote a pamphlet entitled "The Advantages derivable to the Medical Professicn and the Public from the Establishment of Village Hospitals." In the Meath Home he took great interest, and was an active member of the committee of that institution. He was also hon. secretary to the Guildford branch of the Royal Society for the Prevention of Cruelty to Animals. The death of Mr. Napper, which took place suddenly on Friday, Nov. 16th, has been keenly felt by all who knew him, and he will be widely missed by many a benevolent and philanthropic institution, whose objects it was always his endeavour to promote.

DEATHS OF FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are announced:—Dr. A. Legroux of the Trousseau Children's Hospital, Paris, at the age of fifty-five.—Dr. William Goodell, Honorary Professor of Gynæcology in the University of Pennsylvania.—Dr. Louis Figuier of Paris, many of whose works on natural history have been translated into English.

Medical News.

UNIVERSITY OF LONDON.—The following candidates passed the M.B. Examination in October:—

FIRST DIVISION.

Bennett, Lizzie, London School of Medicine for Women.
Bolton, Joseph Shaw, B.Sc., University College.
Collier, James Stansfield, B.Sc., St. Mary's Hospital.
Davies, Hugh, Guy's Hospital.
Fisher, John Herbert, St. Thomas's Hospital.
Hainworth, Edward M., B.Sc., St. Thomas's Hospital.
Lee, William Edward, St. Bartholomew's Hospital.
Leete, Arthur Henry, B.Sc., Guy's Hospital.
Manning, Guy Eugene, Guy's Hospital.
Meakin, Harold Budgett, St. Bartholomew's Hospital.
Poynton, Frederick John, St. Mary's Hospital.
Raper, Matthew Henry, Middlesex Hospital.
Russell, Alfred Ernest, St. Thomas's Hospital.
Sloane, John Stretton, B.Sc., St. Bartholomew's Hospital.
Smith, Edwin, St. Thomas's Hospital.
Stanley, Arthur, St. Mary's Hospital.
Stephenson, John, B.Sc., Owens College and Manchester Royal Infirmary.
Steward, Francis James, Guy's Hospital.
Taylor, Edwin Claude, Guy's Hospital.
Warner, Thomas, King's College.
Young, Robert Arthur, B.Sc., Middlesex Hospital.

SECOND DIVISION.

Andrews, Henry Russell, London Hospital.
Appel, Elizabeth L. Catherine, B.Sc., London School of Medicine for Women and Royal Free Hospital.
Armer, Alfred, Guy's Hospital.
Caine, Dorothea, London School of Medicine for Women and Royal Free Hospital.
Carpmael, Cecil Edward, Guy's Hospital.
Chadburn, Maud Mary, London School of Medicine for Women and Royal Free Hospital.
Chichester, Edward, London Hospital.
Chown, Francis, St. Mary's Hospital.
Collier, Henry William, Guy's Hospital.
Cookson, Frederick Nesfield, Middlesex Hospital.
Corfe, Robert, St. Mary's Hospital.
Corthorn, Alice Mary, London School of Medicine for Women.
Cowen, George Hebb, London Hospital.
Crosby, Thomas Villiers, University College.
Currie, John, St. Bartholomew's Hospital.
Dain, Harry Guy, Mason College and Queen's and General Hospitals, Birmingham.
Evans, Daniel Edward, St. Mary's Hospital.
Fielder, Frederick John, King's College.
Fraser-Luckie, Henry O'Nghtn., St. Bartholomew's Hospital.
Gray, John Alfred, St. Bartholomew's Hospital.
Haines, John William, St. Bartholomew's Hospital.
Harris, Frank Drew, St. Mary's Hospital.
Hopkins, Frederick G., B.Sc., Guy's Hospital.
Houfton, Ernest Henry, Yorkshire College.
Hovenden, Arthur Cecil, Guy's Hospital.
Hovenden, Gerald Stanley, Guy's Hospital.
Hughes, Susan Anne, London School of Medicine for Women and Royal Free Hospital.
Hunt, George Bertram, University College.
Jones, William David, University College.
Kitson, John Pole, University College.
Locke, Frank Spiller, St. Bartholomew's Hospital.
Manning, Thomas Davys, Guy's Hospital.
Mills, Yarnold Hubert, London Hospital.
Moffett, Elizabeth Jane, B.Sc., London School of Medicine for Women and Royal Free Hospital.
Morrison, David, University College.
Murray, Ernest Elias, University College.
O'Flanagan, Martin J., B.Sc., Owens College and Manchester Royal Infirmary.
Rawlings, John Dunnell, St. Bartholomew's Hospital.
Richardson, S. William F., B.Sc., St. Thomas's Hospital.
Sequeira, Walter Scott Harcourt, London Hospital.
Shears, William, St. Bartholomew's Hospital.
Spink, Ernest William, Yorkshire College.
Steen, Robert Hunter, Queen's College, Belfast, and St. Mary's Hospital.
Stevenson, Archibald Campbell, University College.
Stoddart, William Henry Butter, University College.
Stokes, Whitley, St. Thomas's Hospital.
Wallace, Cuthbert Sydney, St. Thomas's Hospital.
Watkins-Pitchford, Wilfred, St. Thomas's Hospital.
Way, George, Harold Cawley, University College.
Weir, Arthur Nesham, B.Sc., St. Bartholomew's Hospital.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen, having passed the necessary examinations and having conformed to the by-laws and regulations, have been admitted Members of the College, viz:—

Abearius, Joseph John, L.R.C.P. Lond., Beyrout Protestant College and London Hospital.
Abrahams, Bertram Louis, L.R.C.P. Lond., University College Hospital.
Allport, Alfred, L.R.C.P. Lond., Guy's Hospital.
Armer, Alfred, L.R.C.P. Lond., St. Bartholomew's and Guy's Hospitals.
Bakhle, Chintaman Ramchandra, L.R.C.P. Lond., University of Bombay and University College Hospital.
Baly, Charles Francis Feyton, L.R.C.P. Lond., University College Hospital.
Barr, Valentine Herbert, L.R.C.P. Lond., Guy's Hospital.

Bates, John Edwin, L.R.C.P. Lond., Cambridge University and University College Hospital.
Battle, Edward Wharmby, L.R.C.P. Lond., Owens College and Royal Infirmary, Manchester.
Bayfield, John Blyth, L.R.C.P. Lond., King's College Hospital.
Best, Palemon, L.R.C.P. Lond., University College Hospital.
Blewitt, William Francis, L.R.C.P. Lond., Mason College and Queen's and General Hospitals, Birmingham.
Boden, John Smedley, L.R.C.P. Lond., King's College Hospital.
Bond, Charles Shaw, L.R.C.P. Lond., Cambridge University and Guy's Hospital.
Bower, Edward, L.R.C.P. Lond., Mason College and Queen's and General Hospitals, Birmingham.
Breen, Adrain Louis, L.R.C.P. Lond., St. Bartholomew's Hospital.
Brennan, Joseph Richard Mary, L.S.A., Owens College and Royal Infirmary, Manchester.
Brereton, Frederick Sadleir, L.R.C.P. Lond., Guy's Hospital.
Brice, Arthur Percy, L.R.C.P. Lond., Westminster Hospital.
Brierley, Thomas Booth, L.R.C.P. Lond., Edinburgh University, St. Thomas's Hospital, and Liverpool Royal Infirmary.
Brooke, Frederick Arthur John Robertson, L.R.C.P. Lond., London Hospital.
Brown, Daniel Dorward, L.R.C.P. Lond., St. Bartholomew's Hospital.
Brown, Daniel Walter, M.D. Edin., Edinburgh University.
Budd, William Hindshaw, L.R.C.P. Lond., University College and Royal Infirmary, Liverpool.
Burditt, Ralph Austin, L.R.C.P. Lond., Owens College and Royal Infirmary, Manchester.
Burroughs, William John, L.R.C.P. Lond., Guy's Hospital.
Burton, Arthur, L.R.C.P. Lond., Cambridge University and St. George's Hospital.
Butler, William Barber, L.R.C.P. Lond., London Hospital.
Calverley, Joseph Ernest Goodfellow, L.R.C.P. Lond., St. Bartholomew's Hospital.
Carter, Frederick John, L.R.C.P. Lond., St. Bartholomew's Hospital.
Clark, Henry James, L.R.C.P. Lond., St. Thomas's Hospital.
Clarke, Arthur Hopkins, L.R.C.P. Lond., St. Bartholomew's Hospital.
Clarke, Fielding, L.R.C.P. Lond., St. Bartholomew's Hospital.
Cochrane, Archer William Ross, L.R.C.P. Lond., St. Bartholomew's Hospital.
Collard, Frederick Stuartson, L.R.C.P. Lond., St. George's Hospital.
Colley, Courtenay Rossiter, L.R.C.P. Lond., Guy's Hospital.
Collier, Walter Edgar, L.R.C.P. Lond., St. Bartholomew's Hospital.
Cooke, Frederick Arthur, L.R.C.P. Lond., St. Mary's Hospital and Wolverhampton General Hospital.
Copeland, Frederick, L.R.C.P. Lond., Westminster Hospital.
Copley, Stanley, L.R.C.P. Lond., Guy's Hospital.
Corfe, Robert, L.R.C.P. Lond., St. Mary's Hospital.
Crossman, Francis Ward, L.R.C.P. Lond., Bristol Royal Infirmary and St. Bartholomew's Hospital.
Currie, John, L.R.C.P. Lond., St. Bartholomew's Hospital.
Davies, John Edward Henry, L.R.C.P. Lond., London Hospital.
Dickinson, Harold Bertie, L.R.C.P. Lond., University College and General Hospital, Liverpool.
Dobie, Edward Cyril, L.R.C.P. Lond., Edinburgh University.
Dorrell, Edward Arthur, L.R.C.P. Lond., University College and Royal Infirmary, Bristol.
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Drake, Ernest Edward, L.R.C.P. Lond., Guy's Hospital.
Drew, Edward Hatherell, L.R.C.P. Lond., St. Bartholomew's Hospital.
Eastes, George Leslie, L.R.C.P. Lond., Guy's Hospital.
Edgar, John Carmichael, L.R.C.P. Lond., Owens College and Royal Infirmary, Manchester.
Evison, Frank Arthur, L.R.C.P. Lond., Guy's Hospital.
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Flegg, Frederick Arthur Martin, L.R.C.P. Lond., St. Thomas's Hospital.
Flemming, Arthur Launcelot, L.R.C.P. Lond., University College and Royal Infirmary, Bristol.
Forsayeth, John Richard Martin, L.R.C.P. Lond., Westminster Hospital.
Fraser, David Harley, L.R.C.P. Lond., St. Thomas's Hospital.
Fricke, Ernest Henry, L.R.C.P. Lond., Charing-cross Hospital.
Fry, William Herbert, L.R.C.P. Lond., Charing-cross Hospital.
Gaman, Francis Robert Snuggs, L.R.C.P. Lond., University College Hospital.
Genge, George Gilbert, L.R.C.P. Lond., St. Thomas's Hospital.
Gerrard, Alfred Henry, L.R.C.P. Lond., University College Hospital.
Gooding, Angelo, L.R.C.P. Lond., London Hospital.
Grattan, Henry William, L.R.C.P. Lond., London Hospital.
Gregor, Edmund William, L.R.C.P. Lond., Middlesex Hospital.
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Hains, Arthur, L.R.C.P. Lond., St. Thomas's Hospital.
Hale, Lancelot Hugh Downman, L.R.C.P. Lond., St. George's Hospital.
Hanbury, William Reader, L.R.C.P. Lond., St. Thomas's Hospital.
Harding, Henry William, L.R.C.P. Lond., St. Thomas's Hospital.
Harman, Leonard, L.R.C.P. Lond., St. Thomas's Hospital.
Hayles, Arthur William, L.S.A., King's College Hospital.
Helme, Thomas Arthur, M.B. Edin., University College, London, and Edinburgh University.
Hopkins, Frederick Gowland, L.R.C.P. Lond., Guy's Hospital.
Howard, Vincent, L.R.C.P. Lond., St. Bartholomew's Hospital.
Husband, Frank, L.R.C.P. Lond., University College and Royal Infirmary, Bristol.
James, Gwilym Prosser Wozencroft, L.R.C.P. Lond., University College Hospital.
Jenkins, Arthur William, L.R.C.P. Lond., University College Hospital.
Job, Henry Percy, L.R.C.P. Lond., University College Hospital.
Jones, Richard, L.R.C.P. Lond., London Hospital.
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Lambert, Percy, L.R.C.P. Lond., St. Bartholomew's Hospital.
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Layton, Frank George, L.R.C.P. Lond., St. Thomas's Hospital.
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Loy, Martin William, L.R.C.P. Lond., London Hospital.
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Moses, John, L.R.C.P. Lond., London Hospital.
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Norman, Reginald Leslie, L.R.C.P. Lond., St. George's Hospital.
O'Leary, Elystan Glodrydd Evelyn, L.R.C.P. Lond., University College and Royal Infirmary, Bristol, and Guy's Hospital.
Ormerod, Ernest William, L.R.C.P. Lond., Cambridge University and St. Bartholomew's Hospital.
Packer, Harry Dixon, L.R.C.P. Lond. Guy's Hospital.
Pain, Arthur, L.R.C.P. Lond., St. Bartholomew's Hospital.
Palmer, Montagu Humphrey Courtenay, L.R.C.P. Lond., Cambridge University and London Hospital.
Penny, Frederick Septimus, L.R.C.P. Lond., King's College Hospital.
Peters, Edwin Arthur, L.R.C.P. Lond., Cambridge University and Guy's Hospital.
Phillips, George, L.R.C.P. Lond., University College Hospital.
Prain, John Leay, L.R.C.P. Lond., St. Thomas's Hospital.
Prior, James, L.R.C.P. Lond., Yorkshire College and General Infirmary, Leeds, and St. Thomas's Hospital.
Reid, Sidney Thomas, L.R.C.P. Lond., Charing-cross Hospital.
Reynolds, Barnard Gore, L.R.C.P. Lond., Guy's Hospital.
Rhind, Thomas, L.R.C.P. Lond., University College Hospital.
Riddick, George Bushman, L.R.C.P. Lond., St. Mary's Hospital.
Robinson, William Edward, L.R.C.P. Lond., Oxford University and Guy's Hospital.
Sames, John William, L.R.C.P. Lond., London Hospital.
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Savage, William Arthur, L.R.C.P. Lond., University College Hospital.
Smith, Edward Hickson, L.R.C.P. Lond., London Hospital.
Smith, Robert Bramwell, L.S.A., Owens College and Royal Infirmary, Manchester.
Spaull, Percy William, L.R.C.P. Lond., St. Thomas's Hospital.
Stanley, Arthur, L.R.C.P. Lond., St. Mary's Hospital.
Stone, William Gream, L.R.C.P. Lond., St. Thomas's Hospital.
Summerhayes, John Ward, L.R.C.P. Lond., St. Mary's Hospital.
Symons, William Henry, L.R.C.P. Lond., St. Bartholomew's Hospital.
Taylor, Mark Ronald, L.R.C.P. Lond., St. Bartholomew's Hospital.
Thurston, Edward Owen, L.R.C.P. Lond., St. Thomas's Hospital.
Toombs, Herbert George, L.R.C.P. Lond., St. Thomas's Hospital.
Trythall, William Reynolds, L.R.C.P. Lond., Middlesex Hospital.
Turner, Ernest Paul, L.R.C.P. Lond., St. Bartholomew's Hospital.
Watkin-Williams, Penrose Lanyon, L.R.C.P. Lond., Middlesex Hospital.
Whitehead, Arthur Meredith, M.B., C.M. Aberd., University of Aberdeen, London, and Nottingham General Hospital.
Wiggin, Hugh Peter Victor, L.R.C.P. Lond., London Hospital.
Williams, Philip George, L.R.C.P. Lond., London Hospital.
Wilmot, Hugh Begbie, L.R.C.P. Lond., King's College Hospital.
Wilson, Horace Richard, L.R.C.P. Lond., University College and Royal Infirmary, Liverpool.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—**The following gentlemen passed the first Professional Examination for the diploma of Fellow in Anatomy and Physiology at a meeting of the Board of Examiners on Thursday, the 15th inst. :—**

Arthur Murray Sheppard, Prince Alfred Hospital, Sydney University, and St. Bartholomew's Hospital, and John Cyril Holdich Leicester, University College, London. Thirteen gentlemen were referred for six months. Sixty-three gentlemen presented themselves for this examination, of whom twenty-three passed and forty were referred.

FOREIGN UNIVERSITY INTELLIGENCE.—*Lille:* **Dr. Barrois has been appointed to the newly established Professorship of the Natural History of Parasites.**—*Rostock:* **Dr. Otto Körner of Frankfort-on-the-Main has been appointed Extraordinary Professor of Otology in succession to the late Professor Lemke.**

MEDICO-PSYCHOLOGICAL ASSOCIATION.—**A meeting of the Scotch division of this association was held in the hall of the Royal College of Physicians, Edinburgh, on Nov. 8th, and was well attended. Papers were read on a case of Hæmato-porphyrinuria following the Administration of Sulphonal, by Dr. Oswald ; the Effect of Thyroid Feeding in some Forms of Insanity, by Dr. Lewis C. Bruce ; and a Case of Epilepsy with Implication of Speech, by Dr. Frank Hay, and gave rise in each case to an interesting discussion on the subject of the paper.**

ROYAL INSTITUTION.—The Christmas course of lectures at the Royal Institution, adapted to children, will be delivered by Professor F. A. Fleming, F.R.S., Professor of Electrical Engineering in University College, London. The subject will be "The Work of an Electric Current," and the first lecture will be delivered on Dec. 27th, at 3 P.M.

BOURNEMOUTH MEDICAL SOCIETY.—At the first ordinary meeting of the session of this society, held on Nov. 16th, Dr. Ramsay read notes of a case of Spina Bifida in an infant three months old cured by excision, and showed the child and photographs of the condition before operation. Mr. Heygate Vernon read notes of the history of a case of Impaction of Gall-stone in the Ileum, leading to Acute Obstruction, treated by laparotomy and incision of the bowel for the extraction of the stone, with a successful result. The calculus was shown. The President (Mr. Parkinson) delivered an address on the Wants of the General Practitioner, and a discussion followed which was adjourned till the next meeting.

FOOTBALL CASUALTIES.—On the 15th inst, in a match at Aldershot between the G and H Companies of the 5th Fusiliers, a player fractured his leg and was removed to the hospital.—The three following accidents occurred on Saturday last. During a match at Pontefract a miner of Normanton fractured his leg and was conveyed to the local hospital.—While playing a match between the Macclesfield and Crewe Alexandra teams a player sustained a compound fracture of his wrist.—In a junior team match played at Coalville between the Huggiescote Albion and Coalville Rising Star clubs a youth fractured his arm.—On the 19th inst., during a match at Preston between the North End and Everton teams, the centre forward and captain of the latter team sustained a "serious" accident to his knee and was carried from the field.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.—The new President of the society, Mr. S. R. Lovett, delivered his presidential address on Monday last, Nov. 19th, and gave a retrospect of sanitary legislation in England from the report of the first Commissioners (Sir Edwin Chadwick and Dr. Neil Arnott, Dr. Southwood Smith, and Dr. J. P. Kay, better known as Sir James Kay-Shuttleworth), whose recommendations were embodied in the first Public Health Act of 1848 and in the Nuisances Removal and Diseases Prevention Acts of the same year, and led to the creation of the General Board of Health and the Metropolitan Commissioners of Sewers as central administrative bodies. At this time, he pointed out, Liverpool and the City of London only had appointed medical officers of health. But when, in 1854, Sir B. Hall (Lord Llanover) conferred like powers on all metropolitan vestries, boards of works, and constituted local sanitary authorities under an Act for the Better Local Management of the Metropolis, all to whom the Act referred except Woolwich availed themselves of it; and of the first officers so created Sir Geo. Buchanan, Drs. Bristowe, Pavy, and Gibbon, and Professor Odling were Fellows of the Society of Medical Officers of Health.

NORTH-WEST LONDON CLINICAL SOCIETY.—A meeting was held at the North-West London Hospital on Wednesday, Nov. 7th, for the purpose of founding a clinical society in the district. The meeting was attended by a large number of representative medical men. Mr. F. Durham took the chair, and Dr. Cagney acted as secretary to the meeting. A number of resolutions were passed constituting the society, adopting provisional rules, and regulating subsequent proceedings. Several speakers, including Dr. Harry Campbell, Dr. Wilbe, Dr. Luff, Dr. Cook, Dr. C. Cayley, and Mr. Jackson Clarke, bore witness to the need for the new North-West London Clinical Society, and spoke of its prospective success. Over seventy members joined on the occasion. The meetings of the society are to be held on the second Wednesday of each month at the North-West London Hospital in a room lent by the governors. A provisional committee was appointed, to hold office until the first general meeting in January—viz., Dr. Donald Hood, Dr. Strange, Mr. F. Durham, Dr. Godfrey, Dr. Milson, Dr. Wright, Dr. John Shaw, Dr. Waterhouse, Dr. Cook, Dr. Sibley, Mr. Claremont, Dr. Wilbe, Mr. A. T. Scott, Dr. Stowers, and Mr. Mayo Collier. Dr. R. F. Gill and Dr. Cagney have undertaken the duties of hon. secretaries.

NATIONAL DENTAL HOSPITAL.—The annual dinner of the past and present students will be held on Friday, the 30th inst., at the Holborn Restaurant. Sir Walter Foster, M.P., M.D., Parliamentary Secretary to the Local Government Board, will preside.

SALOP INFIRMARY.—The 149th annual meeting of the governors of this institution was held last week. The directors report receipts for the year amounting to £5532, including a bequest of £3000 India stock by the late Mr Henry Spencer. The expenditure was £5628.

VOLUNTEER AMBULANCE SCHOOL OF INSTRUCTION. A special concert on the occasion of the fourteenth distribution of prizes will take place at the Banqueting-room, Crosby Hall, Bishopsgate-street, E.C., on Saturday, Dec. 8th, at 8 P.M., when Major-General Lord Methuen, C.B., C.M.G., commanding the Home District, will present the prizes.

A MEETING of the Council of the Metropolitan Hospital Sunday Fund will be held at the Mansion House on Monday next, the 26th inst., at 2.30 P.M., to determine the report of the Council for the year 1894, and to order its publication; to order the convening of the next annual general meeting of constituents; and to consider what day of 1895 shall be recommended to the constituents for next Hospital Sunday.

THE PATHOLOGICAL SOCIETY OF MANCHESTER.—The annual general meeting of this society was held at the Owens College Medical School on Oct. 10th, Mr. F. A. Southam (President) being in the chair. The following office-bearers were elected for the session 1894–95:—President: Professor A. S. Delépine. Vice-Presidents: Dr. H. R. Hutton and Dr. T. Harris. Hon. Treasurer: Dr. T. N. Kelynack. Hon. Secretary: Dr. R. B. Wild. Committee: Drs. W. H. Brazil, T. A. Helme, A. Emrys Jones, E. T. Milner, S. Moritz, E. S. Reynolds, A. T. Wilkinson, and Mr. J. B. Wolstenholme, F.R.C.V.S. Auditors: Dr. T. A. Goodfellow and Mr. Alex. Wilson. Hon. Editor: Dr. E. S. Reynolds. Publishing Subcommittee: President, Dr. J. S. Bary; Hon. Secretary, Dr. T. Harris; Hon. Treasurer, Dr. T. C. Railton; Hon. Editor, Dr. G. A. Wright.

BOOKS ETC. RECEIVED.

ALCAN, FÉLIX, Paris.
Physiologie: Travaux du Laboratoire de M. Chas. Richet. Tome troisième. 1895. pp. 577.

BAILLIÈRE, J. B., ET FILS, Paris.
Formulaire des Stations d'Hiver et des Stations d'Été. Par Dr. de la Harpe. Introduction par Dr. A. Labat. 1895. pp. 303.

BALE, JOHN, & SONS, Great Titchfield-street, Oxford-street, London.
A Monograph on Diseases of the Breast. By W. Roger Williams, F.R.C.S. Illustrated. 1894. pp. 572. Price 21s.

BLACKIE & SON, Old Bailey, London, E.C.
In the Heart of the Rockies. By G. A. Henty. Illustrated. 1895. Price 5s.
When London Burned. By G. A. Henty. Illustrated. 1895. Price 6s.
Wulf the Saxon. By G. A. Henty. Illustrated. 1895. Price 6s.
Things will Take a Turn. By Beatrice Harraden. Illustrated. 1895. Price 2s. 6d.
Banshee Castle. By Rosa Mulholland. Illustrated. 1895. Price 6s.
To Greenland and the Pole. By Gordon Stables, M.D., C.M. Illustrated. 1895. Price 5s.
Olaf the Glorious. By R. Leighton. Illustrated. 1895. Price 5s.
In Press-Gang Days. By E. Pickering. Illustrated. Price 3s. 6d.

CASSELL & COMPANY, London.
Elements of Surgical Pathology. By A. J. Pepper, M.S., M.B. Lond., F.R.C.S. Fourth Edition. Illustrated. 1894. pp. 607. Price 8s. 6d.

CHURCHILL, J. & A., New Burlington-street, London, W.
Year Book of Pharmacy from July 1st, 1893, to June 30th, 1894. With the Transactions of the British Pharmaceutical Conference held at Oxford, August, 1894. pp. 567.

CLAY, WM. F., Edinburgh.
Reports from the Laboratory of the Royal College of Physicians, Edinburgh. Edited by J. B. Tuke, M.D., and Dr. N. Paton, M.D. Vol. V. 1894. pp. 244.

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Atlas of Clinical Medicine. By B. Bramwell, M.D., F.R.C.P., F.R.S. Edin. Vol. III., Part 1. 1894.

GRIFFIN, CHAS. & COMPANY, Exeter-street, Strand, London.
A Manual of Ambulance. By J. Scott Riddle, C.M., M.B., M.A. Illustrated. 1894. pp. 214.

HORN, JOHN, Argyle-street, Glasgow.
Manual of Stretcher Drill and Exercises. By J. E. Brodie, M.D., V.D. 1894. pp. 67.

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Enlargement of the Prostate: Its Treatment and Radical Cure. By C. W. M. Moullin, M.A., M.D. Oxon., F.R.C.S. 1894. pp. 176. Price 6s.

LONGMANS, GREEN, & Co., London.
Transactions of the Clinical Society of London. Vol. XXVII. 1894. pp. 319.

MACLEHOSE & SONS, Glasgow.
Dr. William Smellie and his Contemporaries. A Contribution to the History of Midwifery in the Eighteenth Century. By John Glaister, M.D. 1894. pp. 369.

MACMILLAN & Co., London and New York.
Text-Book of Anatomy and Physiology for Nurses. Compiled by Diana C. Kimber. 1894. pp. 268.

METHUEN & Co., Essex-street, London, W.C.
The Vaccination Question. By A. W. Hutton, M.A. 1894. pp. 128. Price 1s. 6d.
Outlines of Biology. By P. C. Mitchell. Illustrated. 1894. pp. 297. Price 6s.

OLIVER & BOYD, Edinburgh.
The Transactions of the Edinburgh Obstetrical Society. Vol. XIX. Session 1893-94. pp. 212.
The Disorders of Speech. By John Wyllie, M.D., F.R.C.P. Edin. pp. 495. Price 18s.

PUTNAM'S, G. P., SONS, Bedford-street, London.
A Clinical Manual. By Andrew MacFarlane, A.B., M.D. 1894. pp. 139.

REBMAN, F. J., London.
Syllabus of Lectures on Human Embryology. By Walter P. Manton, M.D. Illustrated. 1894. pp. 125. Price 6s. 6d.
Text-Book of Hygiene. By George H. Rohé, M.D. Third Edition. Illustrated. 1894. pp. 553. Price 17s.
Practical Uranalysis and Urinary Diagnosis. By Chas. W. Purdy, M.D. Illustrated. 1894. pp. 357. Price 14s.

SIMPKIN, MARSHALL, & Co., Stationers' Hall-court, London.
The Christmas Hirelings. By M. E. Braddon. Illustrated. 1894. pp. 261. Price 3s. 6d.

SMITH, ELDER, & Co., Waterloo-place, London.
Principles and Conditions of Artificial Feeding. By W. B. Cheadle, M.A., M.D. Cantab., F.R.C.P. Third Edition. 1894. pp. 248. Price 5s.

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Diseases of the Upper Respiratory Tract: the Nose, Pharynx, and Larynx. By P. Watson Williams, M.D. Lond. Illustrated. 1894. pp. 282. Price 8s. 6d.

Archiv für Dermatologie und Syphilis; 29. Band, 2. Heft (W. Braumüller, Wien und Leipzig, 1894).—Railway Surgeon, October, 1894 (Mouadnock Block, Chicago).—Årsberättelse (No. 10) från Akademiska Sjukhuset Iupsala. För Ar 1892. Afgifven af Prof. Dr. S. E. Henschen (E. Berling, Upsala, 1893).—Some Arguments against Vaccination; compiled by C. Wilkinson, November, 1894; 2nd edition (C. Wilkinson, Sydenham, London, S.E.; price 6d.).—Un Cas d'Amyotrophie Primitive; reprint (V. Lourdot, Paris).—Beri-Beri, fiebre fluvial; traduccion de S. R. Herrera ("La Oceania Española," Manila, 1894).—The Cures at Lourdes; by J. R. Gasquet, M.B.; reprint from Dublin Review, October, 1894.—Las Inflamaciones Pelvianas de la Mujer; por el Dr. D. Celestino Martin de Argenta (De la revista de Medicina y Cirugia Practicas, Madrid, 1894).—Leaving it to Nature; by T. M. Dolan, M.D.; reprint from Provincial Medical Journal, November, 1894.—Abstract of Sanitary Reports, Washington, November, 1894 (Treasury Department, U.S., Marine Hospital Service).—New Instruments; by S. Scott Bishop, M.D., Chicago; reprint (American Medical Association Press, Chicago, 1894).—The Johns Hopkins Hospital Reports; Report in Surgery, II., vol. iv., No. 6 (The Johns Hopkins Press, Baltimore, 1894).—The Psychological Review, November, 1894 (Macmillan & Co., London).—The Professional Pocket-book for 1895 (Rudall, Carte, & Co., Berners-street, London, W.).—The British Guiana Medical Annual and Hospital Reports; edited by J. S. Wallbridge, M.R.C.S., and E. D. Rowland, M.B. Edin.; sixth year of issue (Baldwin & Co., Georgetown, Demerara, 1894); price 5s.—Total Extirpation of the Uterus by a New Method; by A. F. Tuttle, M.D., S.B.; reprint (Damrell & Upham, Boston, U.S.A., 1894).—An Address on the Cultivation of the Speaking Voice; by Miss D'Orsey (J. Masters & Co., London, 1894).—In Defence of Pasteurism; by M. B. Colah, M.D., St. Andrews; reprint (N. R. Ránina, Bombay, 1894).—China: Imperial Maritime Customs, Medical Reports, for the half-year ended Sept. 30th, 1891: 42nd issue (P. S. King & Son, King-street, Westminster, 1894).—The Royal Natural History Illustrated, vol. ii. (F. Warne & Co., London, 1894); price 1s. net.—Dermatologische Studien; No. 13: Schwund und Regeneration des Elastischen Gewebes der Haut unter verschiedenen pathologischen Verhältnissen; I., von K. Passarge; II., von Dr. R. Krasing (Leopold Voss, Hamburg und Leipzig, 1894).—Tours in the West Indies: A Guide issued by the Royal Mail Steam Packet Company, Cornhill, London.—Cauterisation of the Nares and Accidents that may follow; by E. P. Ingals, A.M., M.D., Chicago; reprint.—Précis Iconographique d'Anatomie Normale de l'Œil (globe oculaire et nerf optique); par le Dr. Rochon-Duvigneaud; 1895, pp. 136.—De la Chirurgie du Goitre; par le Dr. de Vlaccos; 1895, pp. 44.—L'Insomnie et son Traitement; par Dr. Maurice de Fleury; 1894, pp. 50.—Magazines for November: Strand Magazine, The Picture Magazine.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, for publication in the next number.*

ADAMS, G. E., Secretary of the General Hospital, Cheltenham, has been appointed Secretary of the West Ham Hospital.

ANDREW, PHILIP, M.B., C.M. Edin., has been appointed Junior House-Surgeon to the London Temperance Hospital, Hampstead-road, N.W.

BOAKE, B., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer to the East Flegg Sanitary District of the East and West Flegg Incorporation.

BODEN, J. S., L.R.C.P., M.R.C.S., has been appointed Assistant House-Accoucheur to King's College Hospital.

BRADLEY, M. McW., M.D. Glasg., C.M., L.R.C.P. Edin., has been appointed Medical Officer to the Jarrow (East) Sanitary District of the South Shields Union.

COOPER, T. W. ASTLEY, L.S.A., has been appointed House Surgeon to King's College Hospital.

CRAWFURD, RAYMOND, M.A. Oxon., M.B., B.Ch., M.R.C.P., has been appointed Assistant House Physician to King's College Hospital.

DAVEY, W. H. CARTHEW, M.R.C.S., L.R.C.P. Lond., has been appointed Honorary Assistant Surgeon to the Liverpool Infirmary for Children.

EWBANK, A. G., L.R.C.P. Lond., M.R.C.S., has been appointed House Physician to the Metropolitan Hospital.

GRIFFITH, JOHN, F.R.C.S., has been appointed Assistant Surgeon to the Royal Westminster Ophthalmic Hospital.

KEIFFENHEIM-TRUBRIDGE, L. W. A., M.D. Durh., B.S., L.R.C.P. Lond., M.R.C.S., has been appointed a District Medical Officer and Medical Officer of the Workhouse to the Hoo Union.

LEMARCHAND, A. W., L.R.C.P., M.R.C.S., has been appointed a Medical Officer to the Barnstaple and North Devon Dispensary, vice Walter Cooper, resigned.

MACLEAN, EWEN J., M.D., C.M. Edin., has been appointed Physician-Accoucheur to the St. Pancras and Northern Dispensary, vice A. C. Giles, resigned.

MACDONALD, G. M., B.A. Cantab., M.R.C.S., L.R.C.P., has been appointed House Surgeon to King's College Hospital.

MARTIN, ALBERT M., M.B., B.S., has been appointed Assistant Surgeon to the Royal Infirmary, Newcastle-upon-Tyne.

MILL, GEORGE SYMERS, M.B. and C.M. Edin., has been appointed Honorary Surgeon to the Dewsbury Infirmary, vice John Shives, resigned.

O'BRIEN, H. J., L.R.C.P., L.M., L.R.C.S. Irel., has been appointed Medical Officer to the West Sanitary District of the Poplar Union, vice Brownfield, resigned.

O'SULLIVAN, M., M.B., B.S. Irel., has been appointed Anæsthetist to the Mater Misericordiæ Hospital, Dublin.

RAMSDEN, W. H. F., L.R.C.P. Edin., M.R.C.S., has been appointed Medical Officer of Health to the Uppermill Urban Sanitary District.

RIDLEY, WALTER, M.B., M.S., F.R.C.S. Eng., has been appointed Assistant Surgeon to the Royal Infirmary, Newcastle-upon-Tyne.

SPRAWSON, F. G., M.R.C.S., L.R.C.P., has been appointed House Surgeon to King's College Hospital.

WACE, G., L.R.C.P., M.R.C.S., has been appointed House Physician to King's College Hospital.

WALLIS, C. EDWARD, M.R.C.S., L.R.C.P. Lond., has been appointed Surgeon on the R.M.S. *Garth Castle* by Donald Currie and Co.

WEBB, J. CURTIS, B.A. Cantab., L.R.C.P., M.R.C.S., has been appointed House Accoucheur to King's College Hospital.

WELLINGTON, R. H., L.R.C.P. Lond., M.R.C.S., has been reappointed Medical Officer of Health to the Wisbech Port Sanitary Authority and Port Hospital and Sutton Bridge Urban Sanitary District.

WELLS, S. RUSSELL, M.B., B.Sc. Lond., has been appointed Assistant Curator to St. George's Hospital.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BIRMINGHAM AND MIDLAND EYE HOSPITAL.—Assistant House Surgeon. Salary £50 per annum, with apartments and board.

BIRMINGHAM GENERAL DISPENSARY.—Resident Surgeon. Salary £150 per annum, with an allowance for cab hire and furnished rooms, fire, lights, and attendance.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria Park, E.—House Physician for six months. Board and residence and allowance for washing provided. Applications to the Secretary at the office, 24, Finsbury-circus, E.C.

CLAYTON HOSPITAL AND WAKEFIELD GENERAL DISPENSARY, Wakefield.—House Surgeon, unmarried. Salary £90 per annum, with board, lodging, and washing. Also Junior House Surgeon, unmarried. Honorarium £50 per annum, with board, lodging, and washing.

CHESTER GENERAL INFIRMARY.—Visiting Surgeon for two years. Salary to commence at £90 per annum, with residence and maintenance in the house.

DOVER HOSPITAL.—House Surgeon, unmarried. Salary £100 a year, with board and lodging.

HACKNEY UNION.—Medical Officer for the Eighth District of the Union. Salary £80 per annum, together with such medical fees as allowed by the orders of the Local Government Board. Applications to the Clerk to the Guardians, Clerk's Office, Hackney Union, Sidney-road, Homerton, N.E.

HOSPITAL OF ST. PETER PORT, Guernsey.—Two qualified Surgeons, non-resident, for the hospital and out-door poor for one year. Salary £50 each per annum currency (vaccination included), in addition to which a certain allowance will be made for the vaccination of persons not chargeable to the parish.

KENSINGTON DISPENSARY.—Honorary Medical Officer.—Applications to the Honorary Secretary, 7, Stanford-road, Kensington-square.

MANCHESTER ROYAL INFIRMARY.—Resident Medical Officer for the Fever Hospital at Monsall for at least twelve months. Salary £250 per annum, with board and residence.

PARISH OF ST. LEONARD, Shoreditch.—Second Assistant Medical Officer for the Infirmary, Hoxton-street, N., for six months. Salary £40 per annum, with rations, furnished apartments and washing in the Infirmary. Applications to the Medical Officer, 204, Hoxton-street, N.

ROYAL BERKS HOSPITAL, Reading.—House Physician and House Surgeon for six months. Salary £60 per annum each, with board and lodging. Also an Assistant Medical Officer for six months. Board and lodging provided.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City-road, E.C.—House Physician for six months. Salary at the rate of £40 per annum, with board and lodging.

SHEFFIELD GENERAL INFIRMARY.—Assistant House Surgeon, for three years only. Salary £80 per annum, with board, lodging, and washing.

ST. GEORGE'S, HANOVER-SQUARE, PROVIDENT DISPENSARY, Little Grosvenor-street, W.—Resident Medical Officer. Salary £100, with allowances (about £80) and residence at the dispensary.

WARNEFORD HOSPITAL, Leamington Spa.—House Surgeon, unmarried. Salary £100 per annum, with board, lodging and washing.

WEST KENT GENERAL HOSPITAL, Maidstone.—House Surgeon, unmarried. Salary £120 per annum, with board, furnished apartments, coal, gas and attendance in the hospital.

WESTMINSTER HOSPITAL, Broad Sanctuary, S.W.—Physician.

Births, Marriages, and Deaths.

BIRTHS.

BATTLE.—On Nov. 17th, at Mansfield-street, Cavendish-square, W., the wife of William Henry Battle, F.R.C.S., of a son.

BROWNE.—On Nov. 10th, at Hillfield, Alderley Edge, Cheshire, the wife of P. O. Watkin Browne, M.B., C.M., of a son.

BRUNTON.—On Nov. 15th, at Linden House, Walthamstow, the wife of C. E. Brunton, M.B., M.R.C.S., of a daughter.

GERVIS.—On Nov. 16th, at Windhill-place, Bishop's Stortford, the wife of Henry Gervis, M.B., of a daughter.

LUSON.—On Nov. 15th, at Cromer, the wife of Thomas Luson, M.D., F.R.C.S. Eng., of a son.

MATTHEWS.—On Nov. 15th, at Pembroke-road, Clifton, the wife of Charles E. Matthews, L.R.C.P., M.R.C.S., of a son.

RANDALL.—On Nov. 15th, at Kildermorie, Wimbledon, the wife of Philip N. Randall, M.B., Surgeon Royal Navy, of a daughter.

ROBERTS.—On Nov. 14th, at Silverleigh, Tonbridge, the wife of Henry Roberts, M.D. Brux., M.R.C.S., L.R.C.P. Lond., of a son.

SAUL.—On Nov. 17th, at Dalblair, Boscombe, Hants, the wife of William Saul, M.D., of a son.

STEPHENSON.—On Nov. 14th, at Asansol, India, the wife of F. J. Stephenson, M.R.C.S., L.R.C.P., of a daughter.

MARRIAGES.

BEVERIDGE—STRACHAN.—On Nov. 14th, at St. James's Episcopal Church, Dollar, Arthur Beveridge, M.B., C.M., Lochinver, Sutherlandshire, to Edith, eldest daughter of John Strachan, M.D., Dollar.

FRANCIS—KAVANAGH.—On Nov. 15th, at Dacca, Ernest Edward Francis, M.R.C.S. Eng., L.S.A. Lond., Surgeon Assam-Bengal Railway, of Comilla, Tipperah, Bengal, to Amy, youngest daughter of the late T. H. Kavanagh, V.C., of Lucknow.

MACKENZIE—STEEDMAN.—On Nov. 15th, at Morningside United Presbyterian Church, Edinburgh, Robert Mackenzie, M.D., F.R.S.E., Bruntsfield-terrace, Edinburgh, to Bathia, only daughter of the late William Steedman, Royal-terrace, Edinburgh.

RUDOLF—DANSON.—On Nov. 14th, at Holy Cross Church, Woodchurch, Cheshire, Robert Dawson Rudolf, M.B., C.M., Sewan, Bengal, to Rosa Marguerite, younger daughter of John Towne Danson, Grasmere, Westmoreland.

WOORE—LONGSDON.—On Oct. 30th, at Kingston, Jamaica, Frank Woore, Staff Surgeon of H.M.S. *Canada*, to Helen, third daughter of the late Robert Longsdon, South Norwood-hill.

DEATHS.

DOBINSON.—On Nov. 17th, at Malta, Edward Miall Dobinson, Surgeon H.M.S. *Imogene*, aged 30.

FRASER.—On Nov. 4th, at Chalmers-street, Edinburgh, John Fraser, M.D., C.B., Surgeon-General Army Medical Department, and Honorary Physician to the Queen, aged 75 years.

NAPPER.—On Nov. 16th (suddenly), at Chichester-place, Guildford, Albert Napper, late of Cranleigh, aged 79.

WAKE.—On Nov. 15th, at Wood Cottage, Ballyhooly, Richard Heathcote Wake, M.D., formerly of Checkendon, Oxfordshire.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Nov. 22nd, 1894.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb	Wet Bulb	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
Nov. 16	29·85	S.W.	46	45	77	54	44	0·20	Raining.
,, 17	30·14	S.	49	48	78	54	46	0·02	Cloudy.
,, 18	30·09	S.	49	47	80	54	46	...	Bright
,, 19	30·25	S.E.	44	43	74	54	41	...	Foggy
,, 20	30·23	S.W.	49	47	78	56	44	0·01	Cloudy
,, 21	30·42	S.W.	44	43	54	49	43	0·08	Foggy
,, 22	30·35	S.	45	43	63	50	40	...	Overcast

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (1 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynecological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.).

TUESDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1.30 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.).

WEDNESDAY.—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), Gt. Northern Central (2.30 P.M.), King's College (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.).

THURSDAY.—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (2 P.M.), Soho-square (2 P.M.), North West London (2 P.M.).

FRIDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), Cancer (2 P.M.), Chelsea (2 P.M.).

SATURDAY.—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

MONDAY.—MEDICAL SOCIETY OF LONDON.—8.30 P.M. Dr. C. E. Beevor and Mr. C. A. Ballance: A case of Sub-cortical Cerebral Tumour treated by Operation (the patient will be shown).—Mr. J. D. Malcolm: Illustrations of Some Modes of Death from Ovariotomy.

TUESDAY.—ROYAL MEDICAL AND CHIRURGICAL SOCIETY (20, Hanover-square, W.).—Mr. Colin Campbell (Saddleworth, Yorkshire): The Treatment of Respiratory Affections by means of Large Medicinal Injections through the Larynx (communicated by Mr. Walter Whitehead).—Mr. W. Arbuthnot Lane: A Year's Experience of the Use of Sulphur in Surgery.

WEDNESDAY.—SOCIETY OF ARTS.—8 P.M. Mr. Hiram Maxim: Experiments in Aeronautics.

HUNTERIAN SOCIETY.—8.30 P.M. The President (Mr. C. J. Sympson): The Surgical Aspects of Typhlitis.—Dr. Arthur Davies: Photographs illustrating the Thyroid Gland Treatment.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY.—LONDON POST-GRADUATE COURSE.—Royal London Ophthalmic Hospital, Moorfields, 1 P.M., Mr. W. Lang: Iritis.—London Throat Hospital, Gt. Portland-st., W., 8 P.M., Dr. E. Woakes: Tinnitus and Vertigo.—Bacteriological Laboratory, King's College, 3 to 5 P.M., Prof. Crookshank and Dr. Hewlett: Tetanus, Rabies, and Cholera.

TUESDAY.—LONDON POST-GRADUATE COURSE.—Bethlem Hospital, 2 P.M., Dr. Craig: Insanity with Cardiac Disease, Phthisis, Gout, &c.

WEDNESDAY.—LONDON POST-GRADUATE COURSE.—Hospital for Consumption, Brompton, 4 P.M., Dr. C. Y. Biss: Cases of special interest. Royal London Ophthalmic Hospital, Moorfields, 8 P.M., Mr. W. Lang: Squint.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Bloomsbury).—3 P.M. Lecture by Dr. Beevor.

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN (Leicester-square, W.C.).—1 to 5 P.M. Dr. Morgan Dockrell: Alopecia.

WEST LONDON HOSPITAL (Hammersmith-road, W.).—5 P.M. Dr. W. A. Turner: Neuralgia of Limbs. (Post-graduate Lecture.)

THURSDAY.—LONDON POST-GRADUATE COURSE.—Hospital for Sick Children, Gt. Ormond-st., 3.30 P.M., Dr. Lubbock: Clinical Medical Lecture.—National Hospital for the Paralysed, Bloomsbury, 2 P.M., Mr. V. Horsley: Surgery of the Nervous System.—Central London Sick Asylum, Cleveland-st., W., 5.30 P.M., Mr. John Hopkins: Case in the Wards.

FRIDAY.—LONDON POST-GRADUATE COURSE.—Hospital for Consumption, Brompton, 4 P.M., Dr. C. Y. Biss: Cases of special interest.

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN (Leicester-square, W.C.).—11 A.M. Dr. J. O. W. Barratt: Bacteriological Methods.

SATURDAY.—LONDON POST-GRADUATE COURSE.—Bethlem Hospital, 11 A.M., Dr. Percy Smith: Lunacy Law.

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN (Leicester-square, W.C.).—2 to 6 P.M. Dr. Morgan Dockrell: Uierythema.

Notes, Short Comments & Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale and advertising departments of THE LANCET should be addressed "To the Manager."

We cannot undertake to return MSS. not used.

MANAGER'S NOTICE.

UNDER no circumstances do the Proprietors authorise the insertion of loose advertisement circulars and handbills in THE LANCET. Any such announcements are inserted by the newsagents, whom the Proprietors cannot control. At the same time, the Manager will be glad if readers will send him copies of any circulars, with the name and address of the agent through whom they obtain THE LANCET, and the Manager will then endeavour to mitigate the nuisance.

STRANGE COMPLAINT AGAINST A HOSPITAL.

THE *Islington Gazette* publishes a letter from a correspondent bringing a complaint against the Great Northern Central Hospital of a strange kind. The writer's son had met with an accident and went to a medical practitioner, who attended to him and bandaged his shoulder. Thereafter the writer persuaded his son, being out of work, and "not quite satisfied that he was being treated properly," to go to the hospital. The hospital authorities very properly declined to interfere unless the patient brought a letter from the medical man who had treated the case saying it was a fit one. Thereupon the father was angry, and wrote to the local paper complaining—very unreasonably, we think. If patients think that hospitals exist to lightly review the work of medical men outside, they cannot be too soon disabused. Such a system is not fair either to medical men or to hospitals, to say nothing of patients. The writer of the letter misunderstands the uses of hospitals.

Mr. J. Girling.—Our correspondent's communication will receive early attention.

THE BRUSSELS M.D.

To the Editors of THE LANCET.

SIRS,—Will any of your readers who have taken the degree of "M.D. Brussels" be so good as to give me, either privately or through the pages of THE LANCET, a list of the best books on all the subjects to read for the examination. I am a busy general practitioner and do not wish to read larger works than it is necessary to do. Any information will be gratefully received.

I am, Sirs, faithfully yours,
Nov. 20th, 1894. H. L. H.

MEDICAL ETIQUETTE.

Etiquette.—The case detailed by our correspondent is extraordinary. Of course, we are bound to remember that we are reading only one side of it, and that there may be causes of offence to Mr. A—— on the part of Mr. B—— which do not appear in our correspondent's letter. But that a medical practitioner called to attend a lady in confinement, whose ordinary medical attendant was engaged with another case, should not only refuse to attend for him, but decline to leave when he arrived, though requested to do so by the husband and offered his full fee, is beyond our experience and beyond all ordinary justification.

CONSULTANTS AND GENERAL PRACTITIONERS.

A LONDON consultant has forwarded to us a correspondence between himself and a general practitioner in the country for our judgment. A patient of the general practitioner staying in London with a brother consulted, on the advice of the practitioner, an eminent surgeon for enlarged glands of the neck. Not getting quickly well, he thought fit to ask the advice of our correspondent, who had been of service in his own particular way to the sister-in-law of the patient. The consultant was particularly asked his opinion as to the injection of thyroidine, thyroid tabloids having failed to do good. He did not seek the case or wish to attend it, but gave his opinion in favour of continuing the treatment by iodide of potassium, iron, arsenic, and iodide ointment recommended by the other consultant already referred to. At the same time he suggested writing, and actually did write, to the patient's regular medical man. He does not send his letter, perhaps because he has not kept a copy of it. But he sends us the answer of the practitioner, who seems deeply aggrieved that he should have seen and prescribed for a patient of his without his knowledge or consent, and speaks as if the consultant had appropriated the case The only ground for this last feeling seems to have been that the consultant suggested that while he was in London staying with his brother—patients, it will be observed, of the consultant—he might prescribe for him. It is certainly rather hard on the consultant to complain of his giving his opinion in such a case after he had taken the very right course of corresponding with the patient's regular adviser. Is it unreasonable that a man with a slow, lingering complaint, temporarily in London, whose own medical adviser was far away in the country, should wish to see an eminent surgeon who had been of great service to his sister-in-law? To say so is to bring medical etiquette into discredit. It must be reasonable. The consultant at once communicated with the patient's medical man. What more could he have done? Perhaps he might have urged the patient to return to the consultant he was referred to by his own medical adviser; but we see nothing to lead us to think for a moment that he cared to take the case or that he meant anything but kindness to the patient and courtesy to his regular adviser. We commend this view to the latter gentleman, who seems to us to do the consultant scant justice. We shall not be suspected of partiality towards consultants in this question; but when a consultant does the right thing it is hard for him to be blamed.

"AMBULANCE CLASSES."

To the Editors of THE LANCET.

SIRS,—Suitable diagrams for all ambulance instruction are published at a moderate price by Messrs. Allman and Sons, 67, New Oxford-street. Ambulance-Sergeant Hull, who represents the firm in the shop, would gladly show other publications issued by the firm such as small manuals and a mannikin which demonstrates the position of internal organs and vessels. Messrs. Griffen, Long Acre, purchased a series of physiological diagrams, published by a firm which failed a few years ago, and may still offer them for sale. These diagrams were very excellent and useful. Marshall's diagrams may be mentioned as well known, but they are expensive for such purposes as those named.

I am, Sirs, yours faithfully,
Cranley-place, S.W., Nov. 17th, 1894. M. BARNET, V.M.S.

To the Editors of THE LANCET.

SIRS,—With reference to "M.D.'s" inquiry about Ambulance Classes in THE LANCET of Nov. 17th, I beg to state that I think he will find the set of diagrams published by Messrs. Allman and Sons of 67, New Oxford-street, at a guinea suitable for his purpose.

I am, Sirs, yours faithfully,
REGINALD SLEMAN, Surg.-Captain, A.M.R.
St. Benet-place, E.C., Nov. 17th, 1894.

To the Editors of THE LANCET.

SIRS,—I note the queries of your correspondent "M.D." Are not the diagrams of the St. John Association, specially prepared by the authorities at Clerkenwell (a body from years of actual experience wonderfully conversant with the capabilities of the public) sufficient? Minute anatomy is neither wanted nor desirable in ambulance instruction. It is not wanted because it is of no use in teaching first aid. It is not desirable, as the time now at the disposal of the lecturer is little enough and fancy subjects can only be taught at the expense of the practical. I have had some considerable experience as a lecturer and examiner to volunteer stretcher bearers and to the St. John Association: as a teacher I will say the course as now given takes all the lecturer's time to impart—as an examiner that there are few more unpleasant duties than examining a class taught by a faddist. Ambulance classes are intended to teach the public how to treat promptly cases of emergency before the medical man's advent, and not manufacture a badly, superficially taught, amateur physician.

I am, Sirs, your obedient servant,
Nov. 18th, 1894. PETER GILES.

A QUERY.

Medicus would be obliged if some reader of THE LANCET would inform him what would be a fair amount per week to offer a job-master in a middle-class London suburb for the use of a pony and trap (without a man) for (1) three hours every week-day, or (2) to have it whenever required.

Mr. George Stoker is thanked for his communication. Further details will be necessary to enable us to decide whether any good purpose would be served by publicity.

"OVERCROWDING OF THE PROFESSION."

To the Editors of THE LANCET.

SIRS,—If I am correct in assuming that your comment in THE LANCET of Oct. 27th on the above subject refers to a communication of mine acknowledged in your issue of Aug. 25th, will you kindly allow me to state that to construe my language into "an argument against all medical science which aims at preventing disease" is to entirely misconceive my meaning. I maintained that the advance in sanitary science and that in machinery were alike in their results. The machine takes a certain number of men for its manufacture, but it throws a far larger number out of employment. To this may be largely ascribed our great social problem of the "unemployed." But this is not to say that the advance in machinery is not a social and scientific blessing. It merely goes to explain a fact—namely, "the unemployed." Similarly, sanitary science gives employment to a certain number of medical officers of health—not all of these even new creations; but at the same time, taking the flattering example given in my letter, it wards off cholera from our shores and prevents a large amount of work that would fall to the medical practitioners. Here is the practical point: it lessens the amount of work, therefore less workers are needed, therefore it is an argument eminently practical against over-crowding. Far from arguing against preventive methods in medicine, I consider this warding off of cholera in its practical light an unspeakable blessing to mankind. I consider the advance in sanitary science one of the most glorious achievements, not only of our profession, but of this or any other age. Harvey's great discovery of the circulation of the blood was pregnant with gigantic facts; but the germ culture and inoculation of Pasteur—whom I reverently look upon as the father of germ science—have opened up a field the limits of which the imagination is at a loss to fix. One amongst its results may be the realisation of his own sanguine, almost poetic, dream, "Il est possible à faire disparaitre de la surface de la terre toutes les maladies contagieuses." I am, Sirs, your obedient servant,

November, 1894. M. H. FEENY.

"ACTION AGAINST A COLCHESTER MEDICAL MAN."

To the Editors of THE LANCET.

SIRS,—In reference to an editorial comment in THE LANCET of Nov. 10th, did Dr. Handfield-Jones know, as was stated by Mrs. Shead, and also by Mrs. Lees, her attendant, to Dr. Cook, that the placenta had not passed? If, as Dr. Cook said, it must have done so, may I ask on what grounds was the ergot prescribed? Dr. Cook had not seen his patient after July 23rd. When I was suddenly called in I had no opportunity of judging or knowing what Dr. Cook's treatment was. I may here mention *en passant* that on a previous occasion a Colchester medical man refused to assist me in a serious case. The grievance between me and my medical brethren appears to arise on account of my surgery, which is open daily to the working classes only. With all due respect to the high authority of Dr. Handfield-Jones, he, never having seen the patient, could not possibly judge of her condition or the management which the case then required. It is quite impossible for me in a letter of this kind to go into the *minutiæ* of this case; but I am fully prepared to fearlessly justify my treatment and conduct throughout the case before any amount of unprejudiced medical gentlemen.

I am, Sirs, yours truly,

Colchester, Nov. 15th, 1894. WILLIAM BEALE WALLIS, L.R.C.S.Irel.

REFORM COTTON-WOOL UNDERCLOTHING.

WE have received from the Reform Cotton-wool Underclothing Agency, 15, Fore-street, E.C., samples of their cotton-wool underclothing. The advantages claimed for the cotton-wool are lightness, porosity, warmth, non-irritability, and non-shrinkage. Our experience fully sustained these claims. Another advantage these garments should possess is the resistance they offer to the attacks of moth. Persons who have sensitive skins will approve of the material, as it has a soft, silky texture. It can be obtained in various thicknesses for all seasons of the year, and when washed has no appearance of shrinkage.

Fritz.—1. Yes.—2. We cannot possibly answer; it must depend upon the patient's physical condition, of which our correspondent is the best judge.

WANTED: A NURSING HOME.

To the Editors of THE LANCET.

SIRS,—I have a patient suffering from retention of urine, due to enlarged prostate (he, however, can use a catheter himself), who requires nursing. Could any of your readers let me know of a home where he could be received or a medical man willing to take him in for a reasonable weekly stipend? I am, Sirs, yours faithfully,

Nov. 21st, 1894. J. T. M.

THE LONDON AND PROVINCIAL NURSING AGENCY.

A CORRESPONDENT has drawn our attention to an institution entitled "The London and Provincial Nursing Agency," 328, High Holborn, London, W.C. The agency purports to keep a register of medical men and others willing to receive resident patients; photographs of many of the houses can be seen at its offices; and further information on the subject will be given free on application to the manager. Carriage exercise can be arranged for the use of patients. Trustworthy, trained, and certificated nurses for all sorts and conditions of cases can be supplied, as also experienced attendants, medical rubbers, companions, and valets. It is a stringent rule of this nursing agency that no one is entered upon its register until such time as their experience, training, skill, sobriety, and character have been inquired into. Now this is an excellent programme, but our correspondent's experience would lead us to believe that things are not what they seem. He says that he sent half a guinea to the agency as a preliminary fee and heard no more; that he personally inquired and was told that they had gone away; he has since written and has received no answer. We shall be glad to hear from any other of our correspondents whose experience has been similar, and to learn what the manager of the agency has to say.

"EPIDERMIN?"

To the Editors of THE LANCET.

SIRS,—In the Medical Annual for 1894 epidermin is described as "a milky homogeneous mass made by mixing beeswax, water, and glycerine together, and adding lime or lead oxide as necessary." Omitting to use either of these last two ingredients probably accounts for Dr. Talfourd Jones' failure to obtain a suitable mixture. The reference given is "S. Kohn, Archiv. f. Derm. u. Syph., 1892."

I am, Sirs, yours obediently,

Sheringham, Nov. 20th, 1894. W. J. ERNELY SUMPTER.

To the Editors of THE LANCET.

SIRS,—Will you allow me to tender my best thanks to Dr. J. Talfourd Jones for his letter in the last issue of THE LANCET and to say that the compound that he refers to must, I should think, be different to the unguent base epidermin? As regards Messrs. F. Newbery and Sons, I have communicated my address to them. I regret that I am unable to give further particulars. I am not acquainted with the prescriber and have no means of communicating with him. All that I have been able to learn (indirectly through the patient, for whom it was ordered) is that epidermin may be had from Warner of Philadelphia. I trust that any of your numerous readers who may have met with this compound will communicate on the subject.

I am, Sirs, yours faithfully,

Lewisham, S.E., Nov. 19th, 1894. C. A. BROOKES.

To the Editors of THE LANCET.

SIRS,—Referring to the letters on the above subject in your issues of the 27th ult. and 10th and 17th inst., I beg to say that the preparation, of which I have had a small stock (obtained from the Apotheke Wien, Vienna) for nearly a year, is not a myth, nor does it deserve the hard names your correspondents have given it. It is used by S. Kohn, and possesses the properties Mr. Malcolm Morris ascribes to it. It is a good emulsion, is slightly acid to test paper, and is miscible with water without quickly separating. When spread on the skin it dries and forms a translucent coating, and may be used as a vehicle for medicaments applied to the skin. It is recommended that these should be mixed with glycerine before being added to it. It has the odour and taste of beeswax; the taste of glycerine is not persistent. Dr. Squibb gives the following as an approximation of its composition:—White wax (melted), one part, is mixed with powdered acacia, one part. To these are added distilled water and glycerine, of each one part, previously mixed and then boiled. The mixture is stirred constantly in a mortar until cold. It dries into an unirritating elastic pellicle, suitable as a base for other drugs, which requires to be renewed once or twice daily.

I am, Sirs, yours truly,

New Cavendish-street, W., Nov. 19th, 1894. WILLIAM MARTINDALE.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

During the week marked copies of the following newspapers have been received:—*Liverpool Mercury, Birmingham Gazette, Luton Reporter, Hastings Times, Huddersfield Examiner, Sussex Daily News, Times of India, Manchester Courier, Newcastle Leader, Bristol Times, Bury Free Press, Irish Times, Westmoreland Gazette, Dudley Herald, Guardian, Courrier de la Presse, West Britain and Cornwall Advertiser, Retford Times, Local Government Chronicle, Weekly Free Press and Aberdeen Herald, Reading Mercury, Sanitary Record, Hertfordshire Mercury, City Press, Pioneer Mail, Builder, Yorkshire Post, St. Bartholomew's Hospital Journal, Leeds Mercury, South Wales Echo, Citizen, Liverpool Daily Post, West Middlesex Advertiser, Bristol Mercury, Architect, The Journal (Carmarthen), West Middlesex Standard, Guy's Hospital Gazette, Local Government Journal, Realm, Surrey Advertiser, Gloucester Journal, Isle of Wight Express, Observer, Lowestoft News, Eastbourne Gazette, West Lothian Courier, Walsall Advertiser, Salisbury Journal, Devizes Gazette, Torquay Times, Cheshire City News, Macclesfield Courier, Oldham Daily Standard, Lincoln Gazette, &c., &c.*

Communications, Letters &c. have been received from—

A.—Dr. J. Althaus, Lond.; Dr P. S. Abraham, Lond.; Mr. A. Atkinson, Bradford; Messrs. Arnold & Sons, Lond.; Messrs. Allen & Hanburys, Lond.; Anti-Corset League, Lond., Sec. of; An Assistant; Alpha, Willesden.

B.—Sir W. H. Broadbent, Lond.; Dr. R. W. Burnet, Lond.; Dr. W. W. Baldwin, Florence; Dr. A. Bronner, Bradford; Dr. C. Brown, Barbadoes, W.I.; Mr. A. Baumann, Rayne, U.S.A.; Mr. J. F. Bullar, Southampton; Mr. L. A. Barrow, Lond.; Mr. J. A. Bloxham, Lond.; Messrs. Burroughs, Wellcome, & Co., Lond.; Messrs. Blinks & Son, Ramsgate; Messrs. Burgoyne & Co., Lond.; Messrs. Blondeau et Cie, Lond.; Messrs. W. H. Bailey and Son, Lond.; Messrs. Bryce & Rumpff, Lond.; Messrs. Bean, Burnett, & Eldridge, London; Messrs. Bratby & Hinchcliffe, Manchester; Brit. Med. Assoc., Sydney, Sec. of; Bristol Med.-Chir. Soc., Hon. Sec. of.

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V.—Vigilans, Old Basford.

W.—Dr. A. Wachter, Stafford; Mr. W. B. Wallis, Colchester; Mr. S. Wittmann, Lond.; Mr. W. Wingrave, Lond.; Mr. R. W. Welbank, Banbury; Mr. J. H. T. Walsh, Lond.; Messrs. Wright, Dain, and Co., Birmingham; Messrs. J. Wright & Co., Bristol; Messrs. H. Walker & Sons, Lond.; Worthing, The Mayor of; West London Med.-Chir. Soc., Hon. Sec. of.

X.—X. Y., Lond.

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